

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1916, No. 34

SERVICE INSTRUCTION
OF
AMERICAN CORPORATIONS

BY

LEONHARD FELIX FULD
ASSISTANT CHIEF EXAMINER
MUNICIPAL CIVIL SERVICE COMMISSION
NEW YORK



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT-PRINTING OFFICE
WASHINGTON, D. C.
AT
15 CENTS PER COPY

▼

CONTENTS.

	Page.
SERVICE INSTRUCTION OF DEPARTMENT STORES:	
I. Introduction	5
II. Physical education	6
III. Vocational training	11
IV. Continuation instruction	24
V. Conclusion	26
VI. Appendix	28
SERVICE INSTRUCTION OF TELEPHONE COMPANIES:	
I. The operator	31
II. Operators' school	34
III. Plant employees	38
TYPICAL SERVICE INSTRUCTION IN OTHER INDUSTRIES:	
I. General Electric Co., Schenectady, N. Y.	42
II. The Lakeside Press, Chicago, Ill.	51
III. Metropolitan Life Insurance Co.	54
IV. D. E. Sicher & Co., New York	56
SERVICE INSTRUCTION OF THE CITY OF NEW YORK:	
Police service instruction	59
Service instruction of fire department	62
Service instruction of street-cleaning department	64
Service instruction for clerical employees	67
Service instruction in physical education	70

ILLUSTRATIONS.

	Page.
Plate 1. A, Employees' recitation room, John Wanamaker, Philadelphia; B, Employees' lunch room	16
2. A, Employees' bugle corps; B, Employees' gymnasium	16
3. A, Examining an applicant, New York Telephone Co.; B, School of instruction for operators	32
4. A, Rest room for operators; B, Lunch room for operators	32

SERVICE INSTRUCTION OF AMERICAN CORPORATIONS

SERVICE INSTRUCTION OF DEPARTMENT STORES

I. INTRODUCTION.

Importance of salesforce.—Although department stores exist for the purpose of selling goods and obtaining an increasing patronage from a satisfied public, most department stores have left the salesforce, which is the point of contact with the public, with a low wage scale, uneducated, unstandardized, and recruited by haphazard methods of selection. The first attempts to raise the standards of the department-store salesforces were made by welfare workers, who sought to better the condition of the girls by means of superficial educational activities and other philanthropic methods that are likely to be unjust to the self-respecting spirit of the girls.

Saleswomen.—The salesforce of most department stores is composed principally of women, who are better suited to this work than men, because they learn more quickly, work for a lower wage, and are more willing to obey instructions that they do not understand. On the other hand, they have a lower physical efficiency, and being contented with monotonous tasks, lack the ambition for advancement which generally increases the business efficiency of men. Marriage does not seriously affect this problem, since saleswomen generally have a working life of about 10 years, from the age of 16 to the age of 26.¹ Furthermore, as the result of death or misfortune, many saleswomen return to work after marriage and follow salesmanship as a life occupation.

Team spirit.—The lack of team spirit which is generally found among women workers is accentuated in the case of saleswomen, since a lack of intelligent cooperation separates each department and each member of each department from all others. Saleswomen have practically no opportunity of coming into friendly intimacy with their fellow workers, since they are isolated by the constant presence of customers. Furthermore, they generally have no sense of relation or obligation to their employer other than that of "making a large book," i. e., selling a large quantity of goods. The team spirit of

¹ Beulah E. Kennard. (See p. 30.)

6 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

saleswomen may be developed by means of physical exercises in a gymnasium, and the social spirit may be similarly cultivated by means of music and organized games.

II. PHYSICAL EDUCATION.

Physical examinations.—Although the health of employees is one of the most important factors in efficiency, comparatively little attention has been given to this subject until recently. For the promotion of commercial hygiene and efficiency, applicants for employment should be given a thorough physical examination, including an inquiry into their previous clinical history; an examination of heart, lungs, back, and feet; an inquiry into their habits with reference to sleep, exercise, diet, and bathing; and a few important measurements. This physical examination should be repeated at periodic intervals, with a view to conserving and improving the health of the employees.

The following forms give an idea of the manner in which two firms have met the situation:

JOHN WANAMAKER.

J. W. C. I. PHYSICAL DEVELOPMENT.			
Name.....	Section.....	Age.....	
Examination.	Date.	Date.	Date.
1. Height.....			
2. Weight.....			
3. Chest.....			
4. Teeth.....			
5. Eyes.....			
6. Hearing.....			
7. Nose and throat.....			
8. Digestion.....			
9. Posture.....			
10. Scalp.....			
11. Feet.....			
12. Spine.....			
13. Skin.....			
14. General condition.....			

LORD & TAYLOR.

HEALTH DIVISION—EDUCATION DEPARTMENT.

Nationality.....
Date.....

Name.....
Address.....
Age.....

CLINICAL HISTORY.

Past History (general): Measles.....; scarlet.....; rheumatism.....; other conditions.....; operations.....; pneumonia.....; diphtheria.....; chorea.....; skin eruptions.....; typhoid.....; enlarged glands.....

SERVICE INSTRUCTION OF DEPARTMENT STORES.

7

Present history (general): Headaches_____; cough_____; colds_____; headache_____; indigestion_____; constipation_____; over-fatigue_____; other conditions_____.

Special conditions: Eyes_____; ears_____; nose and throat_____; orthopedic_____; menstruation—Age at start_____; interval_____, duration_____, flow_____, pain_____, reflex_____; headaches_____, nausea_____, lame breasts_____, other symptoms_____; made worse by_____; made better by_____; leucorrhea_____.

Habits of living: Sleep_____; exercise_____; diet_____; cold bath_____.

LORD & TAYLOR.

HEALTH DIVISION—EDUCATION DEPARTMENT.

Name_____; Date_____.

EXAMINATION—MEDICAL AND PHYSICAL.

General: Nutrition_____; complexion_____; muscle tone_____, mucous membranes_____; tongue_____; teeth_____; tonsils_____; throat_____; eyes_____; pupils_____; thyroid gland_____; lymph nodes_____; pulse, before exercise_____; after exercise_____; hands_____; tremor_____; knee-jerk_____.

Orthopedic: Back—deviations_____, rotation_____, flexibility_____, correction_____, physiological curves_____; shoulders—higher_____, forward_____; hips—higher_____.

Chest: Heart—inspection_____, palpation_____, percussion_____, auscultation_____; Lungs—inspection_____, palpation_____, percussion_____, auscultation_____.
.

Abdomen: Tenderness_____; viscerotaxis_____; Intercostal angle_____.

Feet: (Right_____, left_____) : Pronated_____; tenderness_____; flexibility_____; callouses_____; arches—longitudinal_____, transverse_____.
.

Measurements: Height_____; weight_____; vital capacity_____; girths—chest (9th rib) contracted_____; expanded_____; strength of chest_____; back_____; legs_____.

Health of saleswomen.—The importance of periodic physical examinations as an aid in promoting the efficiency of the sales force of a department store has been clearly demonstrated by the findings of a recent examination of 75 saleswomen in New York,¹ of whom

¹ Kristine Mann.

78 per cent suffered from scoliosis, 63 per cent from exaggerated curves of the back, 58 per cent from indigestion, 54 per cent from moderately bad backs; 37 per cent from thoroughly bad backs, 28 per cent from leucorrhea, 21 per cent from pronated feet, 18 per cent from heart weakness, 18 per cent from severe pain at menstruation, and 8 per cent from painless flat foot. Although the average age of these 75 young women was only 26 years, but 8 per cent had good backs and but 12 per cent were in good physical condition.

Weakness of back.—The fact that a large majority of saleswomen appear to be suffering from weakness of the back is of great importance to anyone who seeks to increase the efficiency of the sales force. This condition has a marked effect upon the alertness and activity of the mind, as well as of the body. It is a common observation that toward the close of the day the saleswomen are not physically able to give good service, and anything that will improve the physical condition of these women will add to their selling ability. Eye trouble, swollen tonsils, decayed teeth, and actual illness should receive proper medical attention. Personal advice should be given to those who require it, on the subjects of diet, bathing, and dress. For weakness of the back and postural defects, suitable gymnastic exercises should be prescribed.

The following are typical exercises that will be helpful:

CORRECTIVE EXERCISES—TO BE PRACTICED AS PRESCRIBED.

First—To Correct Flat Chest:

Stand at attention. Inhale through nose deeply as possible, throwing the chest out and holding abdomen in. Hold while counting ten. Exhale slowly. To be done six times. Practice three times a day.

Second—To Correct Weak Back:

Stand at attention. Raise arms above head. Bend forward, lowering arms until tips of fingers touch the floor, without bending knees. To be done four times. Practice three times a day.

Third—To Correct Weak Arms:

With half-pound weights, practice arm and forearm movements of setting-up drill. Practice three times a day.

Fourth—To Correct Weak Abdomen:

Lie at full length on the floor. Without bending knees, bring feet up to a right angle above body. Do not assist with hands. Practice ten times, twice a day.

Selection of employees.—Every applicant for employment should have a thorough physical examination. The searching questions of the medical examiner with reference to the applicant's personal history will disclose her physical fitness for indoor work and her freedom from diseases likely to be communicated. Applicants suffering from minor local ailments should be advised to seek treatment and

to renew their application when cured. Those suffering from epilepsy, leaking hearts, or incipient tuberculosis should be rejected. The general type of the applicant should also be considered. A girl with a nervous inheritance, a history of chorea, a case of chlorosis, a slight lateral curvature, retarded development, or a history of frequent acute respiratory conditions should be discouraged from seeking employment in a department store.

Dental care.—The teeth of every applicant for employment and of every employee should be examined. Instruction in the use of the toothbrush and advice concerning the importance of the early treatment of decayed teeth should be given to all by lectures or by means of printed bulletins. Heads of departments should be required to report employees whose mouths require attention in order that negligence, fear of pain, or lack of money may not result in serious neglect of teeth, gums, or mouth.

Care of feet.—The care of the feet is a matter of special importance in the case of saleswomen, who are obliged to stand all day. Corns, bunions, and callosities should receive proper treatment from a chiropodist, and cases of weak or broken arches or flat foot should receive the attention of a competent orthopedic surgeon. The proper care of the feet and the wearing of proper footwear should be taught by means of lectures and by means of bulletins, since neglect results in painful conditions, interference with walking and standing, and nervous and constitutional symptoms that are detrimental to efficiency.

Rest rooms.—The fact that saleswomen are obliged to be on their feet most of the time results in many cases of dysmenorrhea. These cases may be relieved by nurses in rest rooms provided for this purpose. Rest in bed, a hot-water bag, and complete relaxation with clothing well loosened will enable the saleswoman to return to her duties entirely refreshed in a short time. Although cases presenting symptoms of pain, nausea, and headache may be treated by nurses in rest rooms in this manner, those presenting symptoms of nervousness, weakness, and prostration require the skilled care of a physician, as do saleswomen suffering from uterine, ovarian, and tubal disorders.

Instruction in personal hygiene.—Instruction in personal hygiene may be given to the saleswomen by means of lectures or by means of bulletins. The saleswomen should be made familiar with the processes of digestion and elimination; the physiology of the digestive, respiratory, circulatory, and nervous systems; the importance of regularity of eating and a proper diet; the care of the eyes, teeth, nose, throat, and feet; sleep, exercise, and ventilation; and the prevention and cure of colds. Personal appearance, suitable dress for business women, perspiration, bathing, constipation, and the care of the hands and the hair should receive special emphasis. This instruc-

10 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

tion in hygiene may be supplemented by lectures delivered under the auspices of the local society for the prevention of tuberculosis and the local social hygiene society. The following illustrates what is done:

EDUCATIONAL BULLETIN NO. 24—AMERICAN UNIVERSITY OF TRADE AND APPLIED COMMERCE.¹

For Summer Comfort:

Good Digestion. Plenty of Sleep. Free Use of Cool Water inside and out.

Wear sensible and loose clothing, making as many complete changes as possible.

A large part of discomfort in hot weather is due to disordered stomach and digestion. Coated tongue, loss of appetite, constipation, sour eructations, drowsiness and dullness after meals are all indications of this. This condition affects our energy and spirits and makes the weather seem hotter than it really is.

Eat seasonably, taking ripe fruits, green vegetables, cereals, eggs, salads, light desserts, and meat in moderation. Do not flood the stomach with large quantities of cold drinks with the meals.

Butter, gravies, fats, oils, coffee, pastry, fried foods, hot breads, and much meat are heat-producing foods. Avoid crab meat (except at the seashore), cucumbers, unripe fruits, and bad combinations, such as potato salad with ice cream, or sour things and acids with milk. Loading the stomach just before sleeping is a cause of many upsets. If hungry, eat something light, such as crackers and milk, or ripe fruit, rather than ice cream, soda water, etc.

Drink all the cool water you wish between meals, preferably in small quantities at a time.

On very hot days a sponge or shower or a quick tub bath taken twice a day is not too much. Keep the pores ever active and free, and you will have a feeling of well-being and enjoy the summer more than you ever have before.

Evenings, Saturdays, and Sundays be out of doors every minute that you can. Get your feet on the ground and be outdoor people as these opportunities now permit.

Be a little more deliberate on the hot days, and let moderation and common sense prevent those nerve wreckers, "hurry" and "worry," from making life miserable. Be content to save a little of to-day's energy both in work and play for to-morrow.

CHARLES B. WORDEN, M. D.,
Medical Director.

June 15, 1914.

Recreational facilities.—The physical welfare and moral safety of the saleswomen may be protected by making suitable and adequate provisions for recreation. On a roof garden sheltered by an awning and having swings, rustic benches, potted plants, flowers, and electric light the girls may rest or play games during the lunch hour and dance in the evenings in summer. In a spacious, sunny recreation hall equipped with chairs, pictures, a phonograph, and a piano, the

John Wanamaker.

M. V. Greene.

girls may enjoy dancing or a musical program during the lunch hour. Dancing clubs may serve as a means of teaching dancing to the younger women under conditions in which correct decorum and dignity are maintained, and at stated intervals informal dances may be given, to which the members of the dancing clubs may be permitted to bring outside friends. The organization of bands and bugle corps will also be found to be advantageous.

III. VOCATIONAL TRAINING.

Buyers' conferences.—The simplest form of instruction in salesmanship is that afforded by buyers' conferences. In the organization of a department store the buyer of a department is its principal officer. The efficiency of the sales force may be greatly increased by holding weekly conferences of the sales force, at which the buyers give lectures and suggest solutions to the problems in salesmanship submitted by the saleswomen. Such subjects as "care of stock," "labeled goods," "suggestive selling," "old goods," and "returned goods" may be discussed at these conferences. These lectures should be carefully reviewed at subsequent conferences. Written tests on them may be given, and their educational value may be further increased by furnishing to each sales person a bulletin on the subject of the lecture for permanent preservation and reference.

The following selections are types of some of the lectures mentioned above, together with representative tests held after the lectures:

Lord & Taylor.

Education Department.

BULLETIN.

CARE OF STOCK.

The lectures given by Mrs. _____ were given careful attention and aroused a new interest in the careful handling of stock. Her main points were:

1. *Importance* of handling the stock with care, because a very small damage done by each of 40 or 50 girls would soon make the hat or other article look shopworn.

2. *Putting the stock back* where others can find it and not allowing it to remain out of the case after it has been shown.

3. *Solded or mussed stock* must be reduced in price and causes loss to the department.

4. *Cooperation in the department.* Putting away stock for a busy saleswoman is cooperation in the department, as well as general care of our own and other people's stock.

Cooperation with the buyer: Giving proper attention to all the goods and not selling the newest things in preference to goods that were in the department previously.

Cooperation with the store: Being courteous about returned goods by care in selection and asking the customer, "Are you satisfied?"

12 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

The answers given by the three classes to a series of questions on care of stock showed that some had given the matter careful thought and some had not. Very few remembered the lecturer's point about the large numbers handling stock. All realized that soiled or mussed stock must be reduced in price. A number did not give any answers as to how they could cooperate. Some do not seem to understand what cooperation means. The best answers on these points were:

System is the main thing.
Being courteous to people whether they buy or not.
Handling goods as if they were personal property.
Putting away stock for another girl if she is busy.
Being on the alert to help others.
People can do more by working together.
Showing new girls.

August 18, 1914.

TEST ON THE CARE OF STOCK.

1. Why does carelessness in handling stock cause so much loss in a large department?
2. What must be done with shopworn goods?
3. Why should you sell old goods first? Two reasons.
4. Advantages of cooperation to department?
5. In what ways can you cooperate in your department?
6. What goods in your department are most easily injured and need most careful handling?
7. Suggest some improvement in your department which you think would help to keep your stock in better condition or make it easier to get.
8. What are the points which the head of your department makes most important in handling your stock?

Lord & Taylor.

Education Department.

BULLETIN.

"OLD GOODS."

Mr. ——— began with a proverb—

"Collecting old goods is collecting trouble."

His principal points were the following:

Stock.

1. Many kinds of stock are destroyed by time, even if they are not handled. Among these are rubber goods of all kinds, and spool silk, which rots on account of the dye.
2. All stock is injured by dust and handling, as, for example, side combs, which are scratched by being rubbed against each other.

Buyer.

1. Old goods cause a department to have too much of one kind of stock, because a buyer is allowed only a certain amount of money, and if he has old stock left over in one line he has not enough money to buy even necessary things in another line.
2. A buyer wants to move stock quickly, because his business is to buy, and he wants to turn his money over often in order to make larger profits.

Customer.

1. A customer always likes to see new goods.
2. It is harder to convince a customer that the old goods are "just as good" or that they will suit her as well as the new.
3. A customer is more likely to return old goods when she examines them and finds them shopworn or out of style.

Sales person.

1. It takes twice as long to sell old goods as new, because old goods must be "talked up."
2. The sales person is more interested in new goods. That makes selling much easier and more successful.

Tests on this lecture.

1. Only three or four spoke of the loss of profit by keeping old stock. Some seemed to think it was good to have new stock just because it looks new and fresh.
2. Illustrations were given of French ivory which turns darker with age, perfumes which change color, white hats which grow yellow, feathers which gather moths, tinsel which becomes tarnished, kid gloves which become harder, and velvet which becomes marked by being kept in stock.

August 31, 1914.

TEST ON OLD GOODS.

1. How does stock lose in value by remaining too long in the department?
2. Why does a buyer wish to move stock quickly?
3. How do old goods cause a department to have too much of one thing?
4. Why is a customer more likely to return old goods than new?
5. Condition of notion department at the beginning of the war.
6. Why does it take more time to sell old goods than new?
7. What difference does your own interest make in the amount of goods you sell?

Lord & Taylor.

Education Department.

BULLETIN.**"LABELED GOODS."**

All large department stores carry two kinds of labeled or branded goods, those bearing the name or label of a manufacturer and those bearing the name or label of the store.

Store control.

The most important advantage gained by selling goods with the store label is that the buyer (or store) can control the cost of manufacture, advertising, and selling price, and can not be forced to meet unreasonable demands on the part of the manufacturer.

Mr. _____ gave two convincing illustrations of being in the power of an outside manufacturer. In one case an article which the store had carried for 82 years and had widely advertised was taken away because the store refused to buy the amount of goods demanded.

In another case prices were cut in outside towns, reducing the value of the store's stock.

Buyer.

There is more profit in goods bearing the store label—

1. Because the manufacturer charges the retailer for his name.

2. Because the manufacturer includes the cost of his own advertising in the price to the retailer.

Labeled goods are an advantage to a small store, but large and well-established stores need no outside guaranty for the goods they sell.

Sales person.

Goods sold under the store label are more likely to make permanent customers, as they can be bought in no other store.

Customer.

Complaints made of goods sold under the store label can be adjusted in the store without delay. Other labeled goods must be referred to the manufacturer.

September 24, 1914.

Efficiency bulletins.—The educational value of these buyers' conferences may be increased by issuing efficiency bulletins to the sales force at regular intervals on a subject related to salesmanship or store system. These efficiency bulletins are made the basis of the conferences, and reports of the conferences are sent to the educational director of the store. Examples of these efficiency bulletins are given below.

A CREED FOR THE SALESMEN AND WOMEN OF THE WANAMAKER STORE, NEW YORK.

I believe in the Golden Rule, "Do unto others as you would have them do unto you."

I believe it should govern our conduct between business associates as well as among friends.

I believe that its daily application and observance would make all other rules and regulations unnecessary for me.

Because I would begin the day by being punctual—would waste no time—be cheerful and alert—scrupulously clean in person and mind—willing to give a full measure of time, effort, and attention as my part of the day's product.

Because I would read our advertisements and remember what I read; then tell my customers, and by tactful suggestion, sympathetic interest, and correct service secure their confidence in our merchandise and store.

Because I would consider selling my primary purpose and first duty and hold all other tasks as secondary.

Because I would not allow my stock work to subtract from my attention to customers, but would be ready and willing to serve the public promptly, regardless of other duties.

Because I would know my stock thoroughly and keep it in perfect order and as complete as possible—would always report stock shortage, and conscientiously strive to secure what was asked for, maintaining a follow-up record to insure my customers against disappointment.

Because I would remember the importance of attention to the details of completing and recording a sale, and insure against disappointment and complaint by securing the correct name, complete address, and shipping instructions, and confirming these by repeating them carefully and audibly; by legible writing and figures, always in the correct place; by shunning abbreviations; by making no rash promises, and by referring all requests for special deliveries to the floor manager; by being fully informed concerning our wagon-delivery schedule; by being very careful in directing customers, always securing the correct information when in doubt; by announcing the amount of cash received and counting the amount of change returned in a manner to guard against errors or subsequent disputes.

Because I would look upon all visitors as guests and customers, serving them with cheerful attention; always remembering that they may be heavy purchasers in other sections of the business, although my particular merchandise may not interest them at the time.

Because I would guard against misrepresentation or misleading statements, would be truthful in my recommendations, and hold the customer's interest jointly sacred with the interests of the business.

Because I would always welcome my friends and encourage them to patronize the store, but courteously explain to those who tarried to visit that my time was so occupied that they must excuse me.

Because I would cheerfully serve customers returning goods for exchange or credit, and strive to offset their disappointment by refraining from any discussion of the merits of the merchandise returned, preferring to interest them in something else rather than to attempt to convince them of the error of their judgment in a matter of which they evidently have a fixed opinion, and I would be qualified to do this by knowing my merchandise thoroughly, fabrics, texture, suitability, and probable service.

Because I would welcome the call to assist in other and busier departments than my own, and profit by the opportunity to broaden my knowledge of merchandise and service instead of considering my prestige tarnished by the temporary transfer.

Because I would let it be known that disloyalty or dishonesty would not be passively countenanced by me; that the onus of such would not be shared by me through failure to report it.

Because I would not let trifles or petty jealousies sour my temper or distort my vision of the realities of life, always remembering that strong, well-poised minds refuse them recognition, while weak natures endow them with superlative importance.

Because I would always speak well of the store, holding loyalty on a par with honesty; recognizing that my progress is of my own making. I would hitch my wagon to the star of persistent, patient industry, always busy, cheerfully busy, but never too busy to be considerate of my fellow employees, deserving their good-will by tactful conduct and square dealing—by assisting and encouraging the beginners, helping them to see the importance of the details of system and understand the need and purpose of store regulations and restrictions.

Because I would discourage pernicious gossip, thoughtless criticism of the store management, organization or merchandise, and idle and unkind speculation about my store associates; by defending the absent and spurning the scandal monger; by advocating good-fellowship, and a unity of purpose to be free from worry and the taint of discontent.

All of which can be summed up in the first profession of belief of this creed:

"Do unto others as you would have them do unto you."

EDUCATIONAL BULLETIN No. 21—AMERICAN UNIVERSITY OF TRADE AND APPLIED COMMERCE.

The Post of Duty—

For Service and Guardianship:

The "School of the salesman" puts necessary emphasis upon the *Post of duty* of the salesman; upon the salesman's being at his post as much of the time as possible; upon his being constantly observant there.

16 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

What are some of the reasons?

1. *My "post" is my shop.*—To the extent I am away, or so absorbed that I do not take business advantage of a customer's approach, to that extent *my shop is closed* and my public service and my individual business lose.

2. *Business courtesy and dignity.*—Due regard for appearances and right respect toward the guest and the customer require this attitude of "*attention*" in body and mind.

3. *Selling efficiency.*—A customer stops casually to examine merchandise. Several of us sales people are grouped at a distance. Separated and at our posts, one of us would have been near this customer. But, as it is, an opportunity may be lost. If the salesman thinks customer is simply looking (and the store cordially extends that courtesy, without solicitation to buy) and so keeps his distance, he risks giving the impression that we are indifferent to one who really wants attention. If he steps toward the customer, he risks causing one who may be "simply looking" to feel that, not meaning to buy, she must pass on. It is a fact that we have many complaints of "indifference" and of "oversolicitation" which arise in this way.

Sales forces well scattered and alert have best opportunity to speak of and show their merchandise to the casual customer without risk of wrong impression; and many sales are made, either at the time or later, as a result of the salesman's being thus at hand and able to enter naturally into conversation with the casual looker.

4. *Guardianship of property.*—The selling forces are the guardians of the property committed to their care. The stocks are divided and every part is under some-one's care. So long as human weakness creates temptation to take things which are not our own, just so long this guardianship of the property must remain a serious duty of the salesman. Grouping, allowing the attention to become absorbed too completely in business or in nonbusiness matters, hastening off to observe some celebrity, the fire engines, a parade, or other cause of excitement give opportunity and create temptation. The following are distinct points of duty for the salesman, arising from the sad fact that all are not at all times under control of their own best selves.

(a) To be at the post and be observant, so that if some one with wrong purpose looks to see whether anyone is watching he will see that some one is watching.

(b) When anyone is seen to act suspiciously, or when for any reason the salesman's suspicions are aroused, to send quietly for one in authority or for a special officer, meanwhile continuing to be observant; but not speak to the suspected one or do anything which could be construed as an accusation or suggestion of arrest. When the special officer appears and takes the case in hand, to cease observation and withdraw absolutely from the case. To do all this with as little notice as possible.

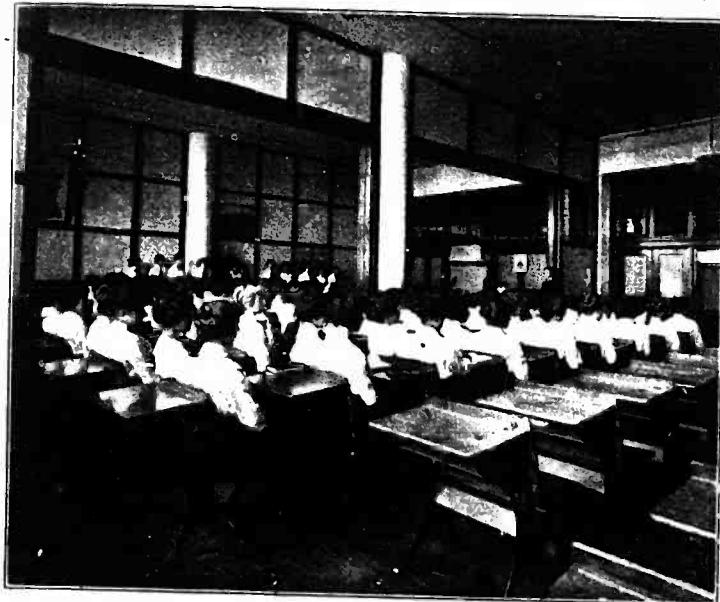
(c) If goods are missed from the stocks, to report the fact promptly to the department chief and to the superintendent's office.

Manifestly, the selling forces can not keep account of stock—of what is sold and what should remain at the close of the day. *But the subconscious faculties come to the aid of the thoughtful and observant.* Those who endeavor to fulfill such a duty conscientiously will intuitively feel and note the fact when what has been committed to their care is imperiled or has improperly disappeared. *The earnest desire and will to safeguard one's charge is the first essential to becoming a good "guardian."*

March, 1914.

BUREAU OF EDUCATION.

BULLETIN, 1916, NO. 34 PLATE 1



4. EMPLOYEES' RECITATION ROOM, JOHN WANAMAKER, PHILADELPHIA.



B. EMPLOYEES' LUNCH ROOM.

BUREAU OF EDUCATION.

BULLETIN, 1916, NO. 34 PLATE 2.



A. EMPLOYEES' BUGLE CORPS, JOHN WANAMAKER, PHILADELPHIA.



B. EMPLOYEES' GYMNASIUM.

SERVICE INSTRUCTION OF DEPARTMENT STORES.

17

No. 197.

EFFICIENCY BULLETIN.¹

January 18, 1915.

FRIENDS SHOPPING TOGETHER.

(For the use of floor superintendents.)

(During the dull season we shall again have time to study some of the interesting questions of salesmanship. One of the points that we have not taken up as a body is that of two friends shopping together. The two incidents given below, or others that you will probably have in mind, may serve as illustrations of the way in which two customers can in an indirect way be a real help to the salesperson in getting clues to what a customer wants. The list of questions at the end you may find suggestive for getting your people to analyze the illustrations given.)

I. Two customers were talking as they entered the costume department.

First customer: "I must have a silk dress that I shall be able to wear to school later. I can't afford to pay laundry bills for wash dresses."

Second customer: "I suggest navy blue."

Salesperson (approaching): "Something in navy blue for school?" She shows a navy blue crêpe de chine dress, pointing out that it is practical and not too dressy, but is brightened up by the white collar and vest. This dress was exactly what the customer wanted, and she took it at once.

II. Two customers stood directly in front of a salesperson for some time looking at bottles of German cologne and talking about them. When the salesperson finally spoke, she said: "Can I help you?"

Customer (to salesperson): "I should like something new in toilet water or cologne." (To friend:) "I like good toilet articles and am truly extravagant in buying them."

Salesperson: "Here's a good cologne—60 cents; larger size, 90 cents."

Customer: "What have you in violet?"

Salesperson silently brought two bottles, one at \$1.75 and the other at \$2.25.

Customer: "I wish I could smell these."

Salesperson: "They are not open."

Customer: "I don't like to put \$2.25 into something I might not like, so I'll wait."

Salesperson puts away bottles.

Customer (to friend): "I wonder if this powder is good? I have to be careful, for it often irritates my skin."

(No response from salesperson.)

Customer (to friend): "Aren't these bottles of smelling salts attractive? I have always liked them."

(No response from salesperson.)

Customers left without purchasing.

Suggestive questions for the discussion.

I. What clues were given in the first sale?

How did the salesperson take advantage of them?

What was shown by the salesperson's first question?

Why was it possible for the salesperson to suit the customer with the first dress shown?

What was the probable effect of this sale on the customer?

¹ William Ellene, Boston.

18 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

II. What clues were given the second salesperson?

What do you think of the selection of merchandise?

What reason had the salesperson for supposing that this customer would be interested in seeing and hearing about the new things?"

What opportunities were lost?

Why is information that customers give us when talking to one another often more useful than what they tell us directly?

No. 150.

EFFICIENCY BULLETIN.

December 30, 1912.

THE TECHNIQUE OF SELLING.

The customer who is just looking.

In the stress of Christmas business perhaps no customer has been more often seen than the one who was "just looking."

If our Christmas experience has been valuable to us, we should know better how to deal with the person who answers us in this way when we offer to be of service.

Because many of us have felt such cases hopeless, it should be of value to us to know what some of our people are doing to turn a customer of this kind into a purchaser. One salesperson reports the following case:

A few days ago a customer was passing through the machine-made dress department, and stopped to look at some dresses on the racks and forms. I addressed her, but she gave the often-heard answer, "No, thank you, there's nothing in particular. I'm merely looking at the dresses as I'm passing through." I noticed, however, that she continued to look, and thinking perhaps to get her interest, I selected one or two of the *most attractive models* I could find, and showed them to her, incidentally remarking about the style, quality of material, and workmanship. The customer showed interest at once, asked several questions about the dresses in general, and finally remarked, "I wonder if you have anything pretty, suitable for an elderly lady?" Several models were shown, all of which pleased the customer. "I think that is just what I want for a gift for my mother. I'm not prepared to buy to-day, but I shall be in again."

The next day the same customer returned and bought a dress.

There was a customer who was looking for "nothing in particular," but who really wanted something.

Do you think that it is fair to infer that the customer who is "just looking" will buy if she finds what she wants?

If you think she will, is there any customer to whom we should be more ready to show our merchandise in order that she may purchase with us rather than elsewhere?

Customers have many times complained of our store because salespeople *would not show merchandise*. May not this account for loss of trade with the "looking" customer?

Do you agree with the method used by the salesperson in the above case when she picked out the *most attractive model* she had in order to get the customer's interest and also to get the cue to what the customer was really "looking" for?

Conferences of operating force.—In addition to the buyers' conferences with members of the sales force, conferences of the members of the operating force are also desirable.¹ At weekly conferences of

¹Bernice M. Cannon. (See p. 80.)

the elevator operators rules for operating, business decorum, complaints of customers, and liability laws may be discussed. At weekly conferences of the markers there may be discussed the subjects of textiles, color and design and the most efficient way of doing their work. Conferences may also be held at which the floor clerks who are assistants to the floor superintendents discuss the problems which come up in their work and make the experiences of each one of value to the rest.

Lectures.—Some department stores, in their efforts to educate their employees, place chief reliance upon lectures on store topics, which are delivered to the employees at regular intervals by supervising officers. Some of the subjects on which such lectures are delivered are the following: "Approach," "deportment," "lookers," "system," "directing customers," "suggestive selling," "enthusiasm," "courtesy," "loyalty," "time," "cooperation," "errors," "advertisement," "service," "indirect advertising," "industry," "knowledge of merchandise," "care of merchandise," "wastes in business," "store directory," and "store system."

Bundle wrappers.—The service instruction for bundle wrappers may be covered in the five lessons given below, to be followed by a written examination.¹ The efficacy of the instruction may be increased by giving to each girl who passes the written examination an increase in her salary of 50 cents per week and by offering a prize of \$1 to the girl who receives the highest grade during the month.

FIRST LESSON.

- United States coin.
- United States currency.
- Canadian.
- Counterfeit coins.
- Money test.
- Comparative size of gold coins.

SECOND LESSON.

- Credits—cash and charge.
- Merchandise certificates.
- Bank checks.
- Postal and express orders.
- Home work—preparation of part-payment sales checks.

THIRD LESSON.

- Part-payment checks.
- Relief—noon, incidental, part-time.
- Disposition of several parts of sales checks.
- Home work—preparation of due package check.

FOURTH LESSON.

- Due package.
- Inspection of merchandise.
- Correcting and reporting errors.
- Wrapping.
- Mail and telephone orders.

FIFTH LESSON.

- Transfers.
- Lost and found parcels.
- Authorization—O. K.
- Why necessary.
- When is coorman's O. K. demanded?
- When is head of stock's O. K. demanded?
- What to do in case of fire.

¹ W. S. Westhaper. (See p. 30.)

Store system instruction.—Every newly-hired sales person requires detailed instruction in the details of the store system, and especially in the preparation of the different kinds of schedules before she is given a sales book and assigned to a selling section. This instruction is generally given from 8.30 to 9.30 each morning. New employees are sent to this instruction room once before they are assigned to a selling section and on at least two subsequent days. The older sales people are sent to the instruction room whenever the aisle manager observes that they do not understand the principles of store system and schedule writing needed by them in the performance of their duties.

The following is a detailed description of the various schedules in use in most stores. To this are added suggestions for the order in which this schedule may be treated in lectures.

LECTURES ON VARIOUS SCHEDULES FOR SALES PERSONS.

FIRST LESSON.

Cash sale: "To be taken."
 Cash sale: "To be delivered."
 Charge sale: "To be taken."
 Charge sale: "To be delivered."
 Collect on delivery.

SECOND LESSON.

Cash transfer sale.
 Charge transfer sale.
 Mail order—Cash, charge, samples.
 Part cash—Part C. O. D.
 Due package.

Elementary salesmanship.—Elementary instruction in the principles of salesmanship is generally confined to the elucidation and application of the fundamental psychological principles involved in making a sale.¹ The methods of attracting the attention of the customer by the sales person's personal appearance, expression, and deportment are shown; the methods of arousing the customer's interest by the proper use of the voice, by an adroit opening thought and by the saleswoman's knowledge of human nature are explained; the means of arousing the customer's desire by a skillful use of the sales person's knowledge of the merchandise and an adequate description of the goods are presented to the novice and the manner of influencing the customer's resolve to purchase by mentioning the price and closing the sale demonstrated in detail.

Let an actual occurrence illustrate. It will be easy to recast it and apply it to any branch of merchandise.

The beginning: A pretty tie in the window of "Trois Quartiers."
 The hero: A salesman, dressed in good taste, courteous, English-speaking.
 Yes; customer will take the tie.
 "Thank you! These, too, are handsome—n'est-ce pas?"
 Two of them prove quite too pretty to ignore.

¹ W. H. B. Kilmer. (See p. '80.)

SERVICE INSTRUCTION OF DEPARTMENT STORES.

21

"Tourists are liking this new tie just now."
"Do you like these new shades? They are going to be popular this fall."
"This new full-dress tie is dignified; don't you think so?"
Six ties are bought instead of one.
Then, white gloves and the newest muffler. The new dress tie clearly required them.
Certain half hose came forward that harmonized beautifully with some of the first-chosen ties.
A new leather belt was good to replace the shabby one in use.
"Collars? You see this little difference here? They are distinguished—would increase the effectiveness of the new ties."
Purchaser remembers there were some raw edges returned with last laundry.
A dozen of the new collars added to the list.
"Thank you; no!" with a laugh; "I simply mustn't let your goods tempt me further."
Notice there was no pressure to sell; no direct questioning of the customer.
The goods were brought forward chattily, without haste or awkward pause, as an amateur might display things he loved and tell of their interest for himself.

The goods were the salesman; not the man.

The following incident is cited as a clever exhibition of salesmanship:

"May I ask, did you find what you wanted?"—with a courteous smile—one of our assistants questioned a lady and gentleman just leaving his section.
"No; I didn't. I guess I am looking for something that doesn't exist," said the lady.
"Won't you be so good as to tell me what it is?"
Article described.
"I'll have it made for you."
"Thank you—but we leave town this afternoon."
"But perhaps you come back by way of Philadelphia?"
"Yes; after a week at Atlantic City."
"Good! May I make the bag? It will be here for you in just one week."

The bag was ready and pleasing; the sale was \$28.50 for this bag, and \$17 for two other articles selected in addition.

Then the lady spoke of a hat.

Our assistant directed them to the millinery floor, suggesting they ask for Miss ——, who, he could assure, would give good service. He then quickly got the millinery floor manager on the phone, telling him that Mrs. and Mr. —— were coming up and would probably ask for Miss ——.

The floor manager was able to recognize the customers. He called them by name and put them into good hands, explaining that Miss —— was on vacation. A hat was sold, and other purchases followed. The total amount involved was some hundreds of dollars.

"A wonderful store! The kind we like to deal with, and never find so good anywhere else," said these friends in bidding good-by. But we say, simply, good storekeeping.

This subject may also be set forth to the clerk in bulletins, such as the one that now follows:

22 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

No. 186.

EFFICIENCY BULLETIN.

May 25, 1914.

INTERPRETING MERCHANDISE FOR THE CUSTOMER.

Merchandise has a history. Much has happened to it before it reaches our hands. It may have come from a remote part of the globe—from Australia, India, Russia, France, Japan—and passed through many lands on its way to us.

Its present history begins with us; its future depends upon us.

The sales person makes its acquaintance and, to a certain extent, studies it. She studies it chiefly from the point of view of the present; that is, in terms of stock—such and such a price, style, color, size, in such and such a location.

The average customer on entering a shop has the future point of view. She has not defined the article she comes to buy; she may know nothing of its past or of its present existence in terms of stock. She has, however, a use for it. We determine whether that need is to be supplied. Thus there is a mental gulf between the two points of view.

The sales person who approaches with questions of price, style, color, etc., shows that she has not studied and grasped the possibilities of her merchandise, the uses to which it can be put, its *future*. Figuratively speaking, she does not budge one step to meet the customer, but attempts the dangerous task of making the customer bridge the gap and walk every step of the way to her till they are on common ground.

To illustrate: A customer asked to be shown a coat to wear motoring over a simple silk dress that she had on. She was using her suit coat, and so wished to purchase for immediate wear. The sales person said, "We haven't anything; they have all been closed out." The customer, in surprise, asked, "What kind of a coat do you think I want?" and persisted in being shown something. The merchandise selected was so inappropriate that she went away without buying. While making another purchase she chanced to remark how odd it was that in such a large store she could not find a coat for her purpose. She was persuaded to try again and did find just the article that she could use. Moreover, this was her first visit to the store, and before she left her cash sales amounted to about \$100.

An incident like this is peculiar to no one department. It is happening in all, and is a problem for all. The solution lies in studying our merchandise from every point of view, past, present, and future—feeling its *human interest and possibilities*.

The more we interpret its past as well as its present, the better able are we to interpret its future. We must study its future—the individual and occasion it can best serve. If we study our merchandise in these ways, the right customer will appear and we shall have the right merchandise already selected for her.

Social aspects.—In all this service instruction the social aspect should not be neglected. An attempt should be made to stimulate interest in the larger aspects of familiar things, to set personal as well as business standards, to broaden the girls' outlook by increasing their personal resources, to develop a high degree of personal efficiency by instruction in hygiene, to develop the economic sense by a discussion of the meaning of capital and wages, and to maintain a proper balance between income and expenditure by planning personal budgets.

Textiles.—Instruction in textiles usually includes a full exposition of the production and manufacture of cotton, linen, silk, wool, hemp, jute, and ramie from the raw material through all the stages of manufacture to the finished product. Instruction is also frequently given in color and design. The instruction in color includes an exposition of the groups of color, tones, tints and shades, and color harmonies. In the study of design the sales people receive instruction in rhythm, balance, and unity, in suitability and uses, and in the practical applications of color and design in house furnishing and costumes.

No. 171.

EFFICIENCY BULLETIN.

October 17, 1913.

SATISFACTION VERSUS SELLING.

This store was organized and equipped not for one day, one year, or one lifetime, but for many. To insure its future we must look beyond the immediate sale and sales total of the day.

We may sell to a customer, or we may satisfy her—the two are not yet synonymous. A sale may be made though our efforts are half-hearted. A customer can be made satisfied only by earnest, intelligent effort which calls to aid *all the resources that the store offers.*

To illustrate:

A customer came to us to buy a hunting outfit. She went first to the shirt-waist department and explained that she wished something for the mountains. She knew that she wanted a flannel waist, but could not give the exact style. Those shown her were not what she wanted, and so she went away without purchasing when the sales person said, "*These are all we have.*"

She then tried to get a skirt, and again did not see what she wanted, and was told, "*These are all we have.*"

She abandoned the idea of getting anything for herself and looked for riding outfits for her two daughters, 8 and 10 years old. She met with the same reply.

This customer was leaving our store, which is the largest specialty shop in New England, without finding what she wanted.

Fortunately, she was intercepted. The result was that she purchased in the boys' department just the waist she wanted, found in another department a heather-down skirt such as is used exclusively for hunting because it does not wrinkle or shrink under any weather conditions; bought in the boys' department two corduroy suits which were excellent for riding habits, and added to these bloomers, garters, storm shoes, and leather gaiters.

In short, *we had what she wanted*, but she was leaving us to buy elsewhere, because of our lack of resourcefulness.

Arithmetic.—The instruction in arithmetic for saleswomen is usually most elementary, being confined to instruction in addition by the quickest methods for use on sales slips and to instruction in simple fractions, such as are used in selling yard goods and parts of dozens. Most of the problems used in this instruction are those which actually arise during the day in the store, and the object of

the instruction is to familiarize the saleswomen with the quickest and easiest methods and to dispel the fear of this subject. Additional instruction is sometimes offered in the principles of subtraction, used in counting back change, and in the principles of percentage employed in the calculation of discounts.

IV. CONTINUATION INSTRUCTION.

Continuation classes.—The compulsory education laws of several States prescribe that when a boy or a girl leaves school for the purpose of going to work at the minimum age at which he is permitted to do so, he must attend a continuation class for one or two years to complete his education. These laws also generally impose upon employers the obligation of dismissing such employees at a sufficiently early hour to enable them to go home, take their supper, and report at the evening continuation school at the commencement of the session. Because of the inconvenience of complying with this provision of the law, many employers prefer to give their employees the benefits of continuation instruction in their stores in the early morning when the business in the stores is normally light. In these cases the stores furnish the room, light, heat, and equipment, and the educational authorities provide the teacher and the supplies.

Morning instruction.—Comparatively few customers visit department stores in the early morning hours, and the service of the store is not interfered with if the junior employees are given instruction during these hours. The usual school hours are from 8.30 a. m. to 10 a. m., and the most satisfactory arrangement is one in which one-third of the junior employees attend each day, thus giving to each employee two consecutive school days each week.¹ The school year is furthermore frequently divided into three terms—a fall term, extending during October and November; a Christmas recess during December; a winter term during January, February, and March; and a spring term during April and May.

Subjects of curriculum.—Arithmetic, spelling, penmanship, and English are the academic subjects most generally taught in continuation classes. A discussion of current events is sometimes included in the course of study; and instruction in civics, ethics, and public speaking is occasionally provided. In large establishments in which the number of pupils justifies it the employees are divided into two or three grades, in accordance with the extent of their previous education.

Secondary instruction.—A few employers provide continuation instruction of a character similar to that furnished by commercial evening high schools. The subjects of instruction include business

¹ W. D. Barnet. (See p. 30.)

EMPLOYEES DISCOUNT SCHEDULE	C.O.D. SCHEDULE WITH ADVANCE PAYMENT	C. O. D. ACCEPT CHECK	C. O. D. SCHEDULE	DISCOUNT SCHEDULE FOR DRESSMAKERS	PAID TAKEN SCHEDULE	PAID SEND SCHEDULE
Should show 10% of the total purchase price deducted, showing net total as the amount of sale on both body of schedule and voucher, with the name and number of the employee on the back of the schedule, and the aisle-man's signature.	The duplicate advance is taken from file. (The name, address, amount, and number compared with schedule.) <i>Attach to all of original and voucher of duplicate schedule and send with goods to inspector's desk.</i>	It is treated the same as a regular C. O. D. Refer to aisle manager.	<i>All of original and voucher of duplicate detached and sent with goods to inspector's desk.</i>			
Have aisle manager sign for labor charges properly noted on voucher.				Having price made by buyer, then allow 6% of total amount. Back schedule same as regular discount schedule. Have Head of Stock sign for inside price and aisle manager sign for allowance on voucher.		
EVEN EXCHANGE SCHEDULE	CREDIT IN OFFICE	CONTRACT SCHEDULE	CHARGE SCHEDULE FOR DRESSMAKERS	CHARGE TO ONE ADDRESS, SEND TO ANOTHER	CHARGE SEND SCHEDULE	CHARGE TAKEN SCHEDULE
Make out as shown. Have signed by aisle manager, and stamped by cashier same as paid schedule.	Schedule should always be referred to aisle manager, who will note particulars on face of schedule. This should be treated same as charge schedule. All of Original Schedule and Duplicate Voucher are sent to inspector's desk with goods.	Always have net price made, signed by buyer, and send to Contract Department. Have aisle manager sign voucher for allowance made.	Always have same signed by buyer or Head of Section. Aisle manager sign for allowance on voucher.	The back of charge part of original is marked with <i>send address</i> . Have aisle manager identify and sign for two addresses.	<i>All of original and voucher of duplicate detached and sent with goods to inspector's desk.</i> The duplicate voucher is left on goods for identification.	<i>Must be signed by the aisleman. Except that a customer with a coin is entitled to merchandise to the amount of Ten Dollars (with the coin number properly noted) without the aisleman's signature.</i> ALL OF ORIGINAL AND VOUCHER OF DUPLICATE detached and sent with goods to inspector's desk.
General Information.	General Information.	General Information.	General Information.	General Information.	General Information.	General Information.
1. Write plainly. Enter each item on schedule clear and distinct and by its right name. Be very careful about your voucher; fill in amount in plain figures in proper space and stamp your sales number on so that your Department and yourself can get the proper credit for the sale.	2. Get names and addresses (both charge and send) in full and absolutely right, asking how spelled if not sure, and repeat them to the customer.	3. On receiving money, show and name aloud the amount so that there can be no after question as to how much the customer gave you.	4. Customers are often just as well pleased to take small parcels with them. Do not ask, "Where shall I send this?" but rather, "Will you take this with you?"	5. In using the TISSUE LEAF SALES BOOK detach the TISSUE LEAF with the original schedule, and send both with the merchandise to inspector's desk; only detach the inspector's voucher from the duplicate, this will leave the duplicate schedule alike in all kinds of sales, remaining in the book.		

arithmetic, business law, business geography, business English, book-keeping, and spelling, with occasional additional instruction in civics, history, and public speaking.

JOHN WANAMAKER COMMERCIAL INSTITUTE, NEW YORK.

COURSE OF STUDY

*Senior class.***Spelling.**

Words selected by teacher from the daily papers.

Arithmetic.

Text : A Practical Business Arithmetic. Moore & Miner.

Banking and bank discount.

Stocks and bonds.

Partnership.

Exchange (domestic and foreign).

Customhouse business.

Rapid addition (part of each lesson).

Business methods.

Text : Business Methods. Teller & Brown.

Chapter.

Banking, bank discounts, and drafts..... 3-5

Merchandise sales, stocks, and bonds..... 10

Partnership..... 11

Insurance..... 11

Postal information..... 6

Railroad and express business..... 8

Contracts, leases, and bonds..... 9

The above subjects will be required. The first four will be taught when the respective subject is introduced in arithmetic.

Business law.

Text : Bly's Business Law.

Pages.

Negotiable papers..... 33-54

Interest and usury..... 106-108

Partnership..... 72-76

Insurance..... 98-101

Corporations..... 77-83

Contracts..... 6-30

Common carriers..... 89-92

Nuisance..... 158-160

Highways..... 160-165

These subjects will be required and should be taught when similar subjects are introduced in arithmetic.

Business geography.

Text : Geography of Commerce and Industry. Rochefau.

This subject embraces a study of the distribution of the vegetable, mineral, and commercial products of the United States, its transportation facilities, telephones, telegraphs, and submarine cables. In each of these the relation of the United States to foreign countries will be shown.

Correspondence.

Chapter 1, Business Methods.

The form and construction of business letters will be studied critically and followed by original work, which in turn should be criticized by the teacher. The pupils should be encouraged to bring letters to class to study.

26. SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

Civics.

Text: Syllabus of Civics. Boynton.

Public speaking.

Original work in the preparation of briefs and their delivery before the class. The research should be along the lines suggested by the study of civics and business methods.

Bookkeeping.

Modern, illustrative.

United States History.

Text to be developed from and illustrated by means of lantern slides of paintings, bas-reliefs, and prizes found in the Capitol at Washington, showing the development of the country and Government. The course to culminate in a trip of the graduating class to Washington.

V. CONCLUSION.

Prevocational training.—Some department stores offer prevocational training to high-school students by calling upon these high schools for students for stock, selling, marking, and office work on busy days and in emergencies. They also offer a laboratory course in selling for two hours on Friday afternoons to high-school girls who are taking the salesmanship course in the high school. While these high-school students are in the store, the girls whose places they take are receiving instruction in continuation classes. The head bookkeepers of some stores give courses of instruction in practical book-keeping in the high schools, and the head cashiers sometimes give similar instruction in the work of department store cashiers and examiners, offering permanent positions in the stores to the pupils who show special aptitude for department store work.

Training of teachers.—So great has become the demand for teachers in department stores, continuation schools, and high schools that a training class for teachers has been established in Boston by means of cooperation between the Union School of Salesmanship and Simmons College of that city. The students spend Mondays in selling in department stores, the mornings of the rest of week in observation of the theory and practice of teaching in the Union School of Salesmanship, and the afternoons in technical courses at Simmons College. About 30 graduates of this training class are at present engaged in teaching salesmanship in department stores and in vocational and prevocational classes throughout the United States. These training classes were founded by and are still under the direction of Mrs. Lucinda W. Prince, who is the mother of salesmanship instruction in American department stores.

The schedules of classes in the Union School of Salesmanship, both for saleswomen and for the teachers' training courses, are given below:

SERVICE INSTRUCTION OF DEPARTMENT STORES.

27

SCHOOL OF SALESMANSHIP.

Schedule of classes for saleswomen.

Daily session.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8.30 to 11.30	Salesmanship. Textiles. Lecture from store repre- sentative.	Arithmetic. English. Demonstration sales.	Sale slip. Color and de- sign. Hygiene.	Arithmetic. Salesmanship. Textiles.	Arithmetic. Merchandise. Economics.

COURSE OF STUDY.

Salesmanship:

- Discussion of store experiences with application of principles involved.
- Demonstration of selling in class with class criticism.
- Lectures by representative business men and women on different phases of retail selling.
- Class conferences on important salesmanship subjects: Care of stock, approaching a customer, etc.
- Individual conferences with girls on points observed in teachers' "follow-up" work in the stores.

Textiles:

- Fibers—wool, silk, cotton, linen.
- Manufacture.
- Fabrics.
- Commercial geography.

Color and design:

- Recognition of color tones.
- Color combinations.
- Appropriate use of colors.
- Principles of design applied to dress and furnishings.

Economics:

- Relation of capital and wages.
- Relation of expenditure to income.
- The spending of money.
- The saving of money.

Arithmetic:

- Sale-slip practice and store system.
- Drill in addition and multiplication.
- Fractions.
- Percentage.
- Cash accounts.
- Business forms.

Personal hygiene from the point of view of business honesty:

- Hygienic dressing.
- Personal appearance.
- Bathing.
- Sleep.
- Ventilation.
- Diet.
- The nerves, etc.

SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.**Practical talks:**

Besides the lectures on business subjects, practical talks are given on such topics as—
 Vocational training.
 The Consumers' League.
 Books and reading.
 The minimum wage.

TEACHERS' TRAINING CLASS, 1913-14.**MORNING.**

Monday.	Tuesday.	Wednesday, Thursday, Friday, Saturday.
Selling in department stores.	Study of merchandise and store system in cooperating stores. Supervision of store work of pupils in salesmanship school.	Observation, theory and practice of teaching the following subjects in the salesmanship school: Textiles. Color and design. Hygiene. Salesmanship. English. Merchandise. Economics. Arithmetic. Daily conference with the director on the morning's work.

AFTERNOON.

Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Selling in department stores.	Economics. Industrial history.	Education. Textiles.	Applied psychology. Education.	Textiles. Textiles.

The afternoon work is at Simmons College and continues during the year with the exception of economics, which is a six weeks' course in the fall.

Various mills, factories, and schools are visited in connection with the above courses.

VI. APPENDIX.**DEPARTMENT STORE COURSE OF STUDY.****FIRST WEEK.****First lesson:**

- (1) National movement for vocational training.
- (2) Salesmanship in colleges, high schools, commercial schools, insurance companies, etc.
- (3) The position of saleswoman as a representative of the firm.
- (4) Opportunity for service.

Second lesson:

- (1) The competition of to-day.
- (2) Essential qualifications of a good sales person.

Third lesson:

Approach to customer.

Fourth lesson:

Textiles.

Fifth lesson:

- (1) Discussion of selling experiences.
- (2) The treatment of price.
- (3) What is salesmanship?

SERVICE INSTRUCTION OF DEPARTMENT STORES.

29

SECOND WEEK.

First lesson :

- (1) "The girl and the selling game." Reading and discussion.
- (2) Suggestion in selling.

Second lesson :

The demonstration sale.

Third lesson :

- (1) Habit.
- (2) Discussion of newspaper article on selling.

Fourth lesson :

Talking points of merchandise.

Fifth lesson :

Silks.

THIRD WEEK.

First lesson :

- (1) Type of customer.
- (2) The "just-looking" customer.
- (3) The customer who wants to look elsewhere.

Second lesson :

Care of the feet and footwear.

Third lesson :

Demonstration sale.

Fourth lesson :

- (1) The Dry Goods Economist.
- (2) Little points in selling.
- (3) Discussion; experience.

Fifth lesson :

Lecture: "Color in dress."

FOURTH WEEK.

First lesson :

- (1) The undecided customer.
- (2) The man customer.
- (3) The set-price customer.
- (4) Tired customer.

Second lesson :

- (1) Remarking to another person while serving a customer.
- (2) Knowledge of stock.
- (3) Service talk, from "Store chat."

Third lesson :

- (1) The use of English in selling.
- (2) Adjectives used in describing merchandise.
- (3) The voice.

Fourth lesson :

- (1) Demonstration sale.
- (2) Types of customer—The tired—Fussy.

Fifth lesson :

Cotton.

FIFTH WEEK.

First lesson :

Lecture: "Color contrast and part contrast."

Second lesson :

- (1) Store organization.
- (2) Merchandise lesson—Buttons.

SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

Third lesson:

Lecture—Buying.

Fourth lesson:

Waste in business.

Fifth lesson:

Narrowing the sale.

SIXTH WEEK.

First lesson:

Lecture—Color balance.

Second lesson:

Visit to the Warnright Knitting Mills.

Third lesson:

(1) The proper handling of merchandise.

(2) Advertising; our relation to this end of the business.

(3) Store directory.

Fourth lesson:

Written review.

Fifth lesson:

Oral review.

PRINCIPAL DEPARTMENT STORE EDUCATIONAL DIRECTORS.

No.	Firm.	City.	Educational director.
1.	The Hub	Baltimore	Maud Husted.
2.	William Filene	Boston	Bernice M. Cannon.
3.	William Hengerer	Buffalo	Mildred Robison.
4.	Sears-Roebuck Co.	Chicago	G. H. Miller.
5.	Halle Bros. Co.	Cleveland	Isabel C. Bacon.
6.	William Taylor & Son	Cleveland	W. S. Westhafer.
7.	L. S. Ayres	Indianapolis	Olma Steeg.
8.	Broadway Store	Los Angeles	W. H. B. Klimer.
9.	Edward Schuster	Milwaukee	Alice F. Brown.
10.	L. Bamberger & Co.	Newark	Marjory Stoneman.
11.	Bloomingdale Bros.	New York	Anna Howell Wilcox.
12.	Lord & Taylor	New York	Beulah E. Kennard.
13.	John Wanamaker	New York	W. D. Earnest.
14.	Gimbels Bros.	Philadelphia	R. H. Preston.
15.	Emporium	San Francisco	M. V. Greene.

SERVICE INSTRUCTION OF TELEPHONE COMPANIES

I. THE OPERATOR.

Divisions of the telephone service.—The employees of telephone companies are usually divided into five departments: The commercial department, which makes contracts with the patrons of the company and collects payment for the service rendered; the accounting department, which keeps the books and accounts of the company; the engineering department, which attends to the larger technical problems of the company; the traffic department, which consists of the operating force; and the plant department, which installs and maintains the physical equipment. No service instruction is given to the employees of the engineering department, because they are all well equipped with technical knowledge before entering the employ of the company, and no service instruction is given to the employees of the commercial and accounting departments, because their duties are simple and nontechnical. Detailed instruction, however, is given to the employees of the traffic and plant departments.

Importance of operators.—Electricity, equipment, and operators are required for furnishing telephone service. Of these three elements, the operator is the most important, and to secure operators possessing the necessary qualifications the telephone companies make the work immediately remunerative by paying the operators while they are learning, offer employment to all who have learned the business, and offer to satisfactory employees permanent employment unaffected by dull seasons or an overstocked labor market.

Hours of service and advancement.¹—Since telephone service is continuous throughout the 24 hours, operators are required to work as day operators at salaries from \$6 to \$12 a week, as evening operators at salaries from \$7 to \$13 a week, and as night operators at salaries from \$8 to \$14 a week. As an operator's value increases with her experience, a schedule of wage increases has been provided to furnish extra remuneration at the end of given periods. Furthermore, pref-

¹ New York Telephone Co.

erence in hours of service is given to those who have been longest in the service. Operators of experience, possessing the necessary qualifications, are assigned to the higher positions of senior operators, information operators, and toll operators, and those who by their self-control, reliability, sympathy, ability, and cool-headedness demonstrate executive ability are promoted to the positions of supervisor at a salary of \$15 a week and of chief operator at a salary of \$25 a week.

Training of operators.—In the large cities the telephone company generally maintains a training school for operators, with a principal and a corps of instructors. In the smaller cities and towns the new operators are instructed by a local supervisor designated by the chief operator, who follows as closely as possible the course of study used in the operators' training schools of the larger cities. The course of instruction usually covers four weeks and the students are paid not less than \$5 a week while learning. Instruction is given by means of lectures, supervised study periods, catechism, recitations, written examinations, and demonstrations on a switchboard of the same type as those used in the regular exchanges. During these demonstrations the instructors personate subscribers and the students handle the calls as operators.

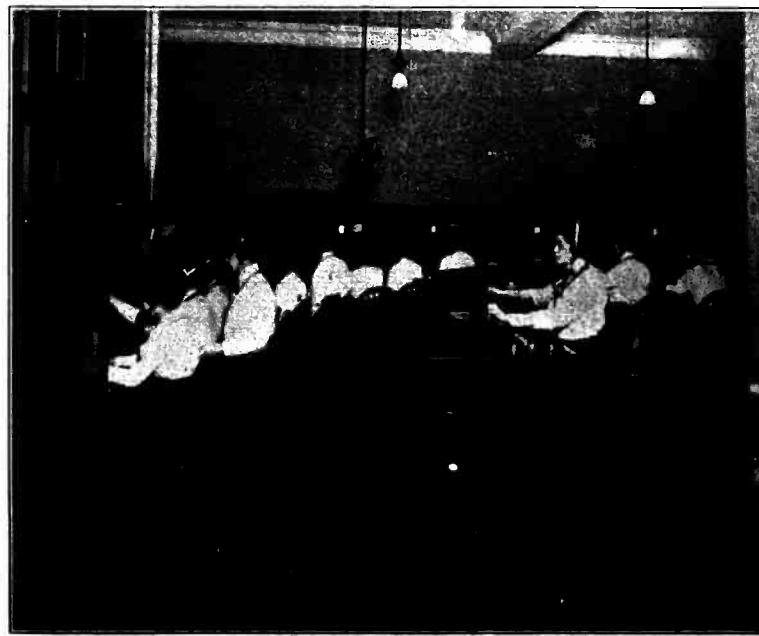
Qualifications demanded.—The applicants are subjected to a careful examination of their qualifications. They must be between the ages of 16 and 23, and at least 5 feet in height. Inquiry is made regarding the applicant's physical condition by questioning her regarding her present state of health, the illnesses she has had in recent years, whether she has ever suffered from any nervous trouble or fainting spells, and when she had occasion to consult a physician. No applicant is considered eligible if her general condition of health is bad, if she shows evidence of skin disease, or is afflicted with a physical deformity of hands or body that would in any way interfere with the proper performance of her work. Each candidate is required to read with each eye the letters on a standard test chart placed about 10 feet from her and to name the colors painted on the test chart. Her hearing is tested by observing the applicant while she is listening, particularly when questions are put to her in a low tone, and by asking her whether she is subject to earache, or to catarrhal trouble, or whether she has had abscesses in her ears or has noticed any trouble with her hearing. In addition to being given the reading test, the applicant is also required to repeat a list of numbers compiled for the purpose. During this test the clearness and distinctness of the applicant's enunciation and the accuracy and carefulness of her pronunciation as well as any impediment in her speech are noted.

BUREAU OF EDUCATION.

BULLETIN, 1916, NO. 34 PLATE 3.



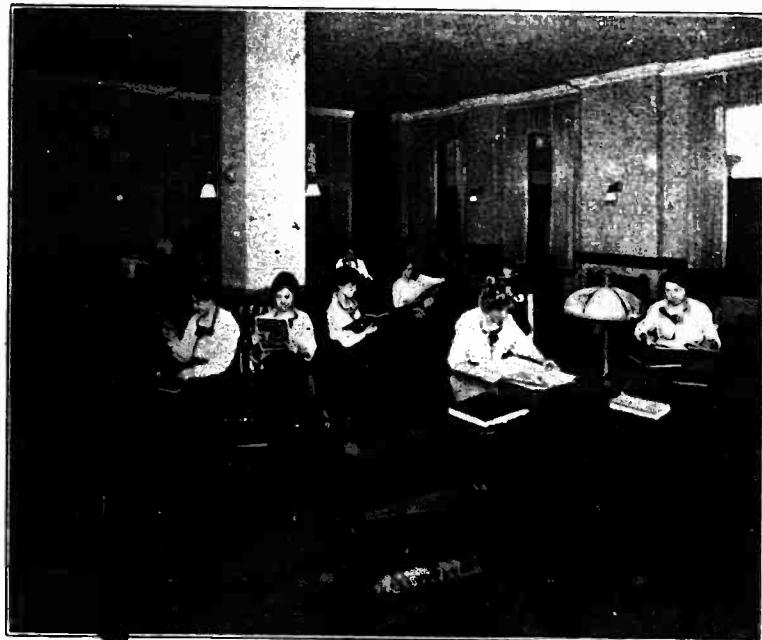
A. EXAMINING AN APPLICANT, NEW YORK TELEPHONE CO.



B. SCHOOL OF INSTRUCTION FOR OPERATORS.

BUREAU OF EDUCATION.

BULLETIN, 1916, NO. 34 PLATE 4.



A. REST ROOM FOR OPERATORS, NEW YORK TELEPHONE CO.



B. LUNCH ROOM FOR OPERATORS.

As far as may be practicable, applicants are required to have completed a course of study in a public school or its equivalent in a private school. Consideration is also given to courses of study in night school and business school and to experience gained in business offices and other places of employment. Each applicant is required to read aloud a selection from the General Regulations for Operators. The examiner notes whether this is done clearly, accurately, and with expression, and whether the applicant gives evidence that she has a correct understanding of the subject matter. He notes also whether the applicant speaks grammatically, and whether her speech is free from the current slang. The personal characteristics and mannerisms of the applicant are also observed and judgment is formed regarding her ability to think clearly and quickly and to act promptly and intelligently.

Candidates must possess an even temperament, a pleasing courteous manner, a neat businesslike appearance, good moral character, a willingness to work at night and on holidays, and possess general reliability.

Selection of applicants.—While waiting to be interviewed in reference to appointment and during the interview, each applicant is closely watched. The examiner notes whether she is quiet and dignified, pleasant in manner, refined in appearance, and courteous in speech. Tidiness and cleanliness of clothing and person, as well as the absence of frivolous appearances, are observed. The applicant's reliability is determined by judicious questioning, by observing her manner of talking and of replying to questions, from her general appearance and by ascertaining whether she is living with her parents and if not, the reason for this and the name of the person with whom she is making her home. Two reliable references are also required.

The following form shows the scope of the initial application.

NEW YORK TELEPHONE CO.

APPLICATION FOR EMPLOYMENT.

FEMALE.

Date 191 ..

Name in full Address

Age and date of birth Married

What school did you attend? What class were you in?

What position are you applying for?

Is your eyesight good? Is your hearing good?

FORMER EMPLOYERS.

(Give the names of the firms you have worked for, beginning with the last.)

Name _____ Address _____
Position held _____ How long employed? _____
Date of leaving _____ Wages or salary? _____
Why did you leave? _____
Name _____ Address _____
Position held _____ How long employed? _____
Date of leaving _____ Wages or salary? _____
Why did you leave? _____
Have you ever been employed by any telephone company? _____
Have you any relatives employed by this company? _____
Introduced to this company by _____

REFERENCES.

Name.	Address.	Business.
-----	-----	-----
-----	-----	-----
-----	-----	-----

REMARKS.

(These spaces are not to be filled in by applicant.)

II. OPERATORS' SCHOOL.

Central office operators, upon entering the employ of the telephone company, are given a four-weeks' course of instruction in telephone operating at the operators' school. In this school each class of students is placed in charge of a classroom supervisor. The course of study consists of lectures on operating practices and in the study of operating instructions issued for the guidance of central office operators. Each supervisor assigns the work to be covered during the study period and hears the recitations. In some cities the lessons, in leaflet form, are given to the students one at a time on the evening preceding the day they are to recite, and at the same time the instructor explains the lesson. On the following day the students give an oral recitation in the classroom, and later they are placed at the school switchboard, where the lesson is taught practically.

Scope of instruction.—The course of instruction embraces the organization, the functions, and the importance of the different officials and departments for the purpose of administration and operation, as well as the general rules governing the conduct of operators in their relations to the public, to their superiors in office,

and to each other. The student operator is taught the construction of the telephone instrument, the switchboard, and its central office auxiliary equipment by the use of telephone apparatus with all its interior works exposed and by the use of graphic charts depicting on a large scale the details of the minute parts of this apparatus. The whole make-up of an operating position at the board is shown and explained to the students, who are taught just what happens in every part of the plant from the time one subscriber who wants to reach another lifts the receiver of his telephone from its hook. The student is carried through the process of answering the subscriber's signal, taking his order, calling the number wanted, reporting busy lines, and "don't answers," to the point when he hangs up his receiver and thereby signals that he is through talking.

Lectures on Operating practice.—A course of lectures on operating practice or the rules for handling all classes of calls is delivered by an instructress who is aided by a demonstrating section of a telephone switchboard and by charts and diagrams. The student must master the phraseology of this practice which has been adopted by all telephone companies after years of study and which is so skillfully worded as to meet all operating situations with the brevity and clearness of meaning necessary to the speed of service demanded by the public. This lecture course includes also instruction in the different classes of subscribers' service, the privileges to which each class entitles the subscriber, the method of handling business from automatic pay stations and prepayment subscribers' service involving the deposit of coins and the detecting of signals that the proper coin deposits have been made, the metering of calls from measured service subscribers' stations and pay stations, and the handling of toll and long-distance calls.

The thoroughness of such a course is apparent from the following typical courses of the New York and Chicago telephone companies.

NEW YORK COURSE OF STUDY.

FIRST WEEK.

1. General introduction to the business. Explanation of the hours, salaries, and regulations relating to attendance and deportment.

Answering, taking and repeating calls, local multiple calls, ringing, and rural line calls.

2. Explanation of the classes of service.

Central office abbreviations, writing tickets, registering, and requests for charges (on calls completed by "A" operators).

3. The method of handling trunk calls.

Direct circuit trunk calls, tandem circuit trunk calls, and ring-down trunk calls.

4. The method of handling calls (continued).

5. The description and use of toll boards.

Toll board two-number calls and toll board particular person calls.

36 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

6. The meaning and use of long-distance toll boards.

Long-distance two-number calls and long-distance particular person calls.

SECOND WEEK.

7. The organization of the company.

Calls for official lines, information calls, "bell rang" reports, complaints, and equipment trouble.

8. Requests for charges and rates, abandoned calls, supervising, disconnecting, overlapping operations, right of way calls, and clearing double connections.

9. Multiple marking calls and answering jack marking calls.

10. Emergency calls and denial of service for nonpayment.

11. Telegram calls.

12. Calls from multi-coin prepayment stations and calls from postpayment stations.

THIRD WEEK.

13. Busy calls, including reversed calls.

14. Delayed and don't answer and out of order calls.

15. Wrong number calls.

16. Restoring connections.

17. Miscellaneous conditions and traffic record (peg count).

18. Review work and necessary special instructions.

FOURTH WEEK.

The lectures during this week will be devoted to reviewing the work already done by the students while in the school and to examining students to ascertain whether or not they are ready for transfer to central offices.

CHICAGO COURSE OF STUDY.

1. The completion of local multiple connections.

Answering calls.

Taking and repeating calls.

Use of different parts of keyboard.

Ringing.

Testing.

2. Classes of service.

Line lamps.

Registering.

Tickets.

3. Method of completing trunk connections.

Direct circuit trunk.

Tandem.

4. Trunk connections.

Busies.

No trunks.

Ringing.

5. Trunk connections.

Ring-down.

Recording.

6. Long distance.

Particular person calls.

7. Organization and official calls.

Handling complaints and equipment trouble.

8. Supervision and disconnection.

Third party connected.

Right of way.

Charges.

Abandoned calls.

9. Multiple marking calls.

Answering jack marking.

10. Emergency calls and denied service.

11. Telegram calls.

12. Busies and reversed calls.

13. Don't answers and out of order.

14. Wrong numbers.

15. Restoring connections.

Local multiple.

Direct circuit trunk.

Tandem trunk.

Recording calls.

16. Traffic record.

"A" operators.

"B" operators.

SUMMARY OF CHICAGO COURSE.

	Hours.
Operating switchboard practice.....	36
Voice training.....	6
Relief period.....	6
Recitation.....	44
Lunch period.....	10
Enunciation.....	12
Spelling exercise.....	4
Calisthenics (physical exercise).....	5
Explanation of new lesson.....	15
Dummy multiple practice (chart and lap boards).....	24
Hygienic lectures.....	4
Total number hours in school course.....	166

FIRST LESSONS IN TELEPHONE OPERATING [CHICAGO].

Lesson 5.

1. Q. If a call is received for "Information," what should the operator do?
A. She should repeat, "Information," and establish the connection.
2. Q. If the calling party asks for a directory, what should the operator say?
A. "I will give you the repair department."
3. Q. If the calling party states that his bell has been rung, what should the operator say?
A. "Will you excuse it, please?" and if he does not hang up, she should repeat the phrase. If he does not then hang up, she should say, "There is no one on the line now."
4. Q. If he still remains at the telephone, what should the operator say?
A. "Will you hang up, please?"
5. Q. If the calling party asks if his bell has been rung, what should the operator say?
A. "There is no one on the line now. Excuse it please?" and if he does not hang up, she should repeat the phrase. If he does not then hang up, she should say, "Will you hang up, please?"
6. Q. If the calling party requests a ring on his line, what should the operator do?
A. If the calling party gives his number, she should repeat the number. On individual lines, when the number plate shows the number, she should say "Yes, sir."
7. Q. If the calling party does not give his number, or the individual line has no number plate, what should the operator say?
A. "Your number, please?", and then repeat it.
8. Q. If the calling party does not hang up after giving the call, what should the operator say?
A. "Will you hang up, please, while I ring?"
9. Q. If in repeating the ring on the line the calling party states that he is an installer, what should the operator do?
A. She should remove the plug from the answering jack and pass an order to the trouble operator, saying, "Ring on (station number)."
10. Q. If the calling party requests the panel and jack numbers, what should the operator do?
A. She should refer to the panel number plate and answering jack number and give the information.

11. Q. If the calling party says, "What line?" what should the operator do?
 - A. She should refer to the number plate or reverting chart and (1) on an individual line, give the line number, (2) on a two-party line give either station number and add, "Two-party," (3) on a four-party line give the circuit number as, "Circuit (circuit number)," or if there is no circuit number, give any station number and add, "Four-party."
12. Q. If there is no number plate or entry on the reverting chart, what should the operator say?
 - A. "No number plate."
13. Q. If the calling party requests the class of service, what should the operator do?
 - A. She should obtain it from the lamp cap opal and give it.

III. PLANT EMPLOYEES.

Selection of plant employees.—Although applicants for positions in the plant department are not subjected to a physical examination, they are selected with respect to their physical ability to perform the work for which they have applied and must be of good moral character. They must also be able to read and to write legibly, and should preferably have at least a common-school education. No written examination is given to applicants for employment.

Training of plant men.—Employees of the plant department receive instruction in the inspectors' and installers' school. All instruction is given in the form of extemporaneous talks by the teachers, with illustrations on the blackboards, but no text books. The course of instruction is divided into three grades. New men have one week of instruction in the first grade. At the conclusion of this course two written examinations are held and the men are sent out to work for a week or more before entering upon the instruction of the second grade. The course of instruction in the second grade covers eight days. The time which elapses between the second grade and the third grade varies and depends upon the ability of the man and the amount of work on hand. The instruction in the third grade covers two weeks. In addition to the technical instruction given in this school, lectures are delivered to the men on such subjects as "Safety," "Relation with subscribers," "Manner of approaching public," "Personal appearance," etc. Employees in the plant department are also supplied with 28 instruction books for their information and guidance. These instruction books are revised from time to time and are supplemented by plant instructions and by engineering bulletins. Cable splicers are given a special one-week course of instruction by the splicing supervisor. This instruction consists of a series of talks, the actual performance of the work of a splicer's helper, and an examination on the subjects covered in the course.

Below is given a typical course for the training of plant men in telephone companies, together with typical examination questions

covering such a course. An examination paper from the training school of splicers' helpers of the New York Telephone Co. is also given as an example of examinations of this nature.

TYPICAL TRAINING COURSE FOR PLANT MEN.

First grade (new men—time, one week):

Elementary electricity and magnetism. Splicing (inside wire, soldering, bridle and sleeve splices, bridging connectors). Cable system and cross connecting. Color code and cable lacing. Protectors. Assembly of No. 20-S desk stand. Connecting up instruments. Desk stand and wall set instrument circuits. Bell adjustment. Entering wires. Operating switchboards and monitors. Examination. General instruction.

Second grade (time, seven or eight days):

Soldering wires to lugs. Bell operation. Bell adjustment. Generator. Induction coil. Transmitter. Receiver. Condenser. Desk-stand circuit. Assembly of No. 20 desk stand. Wall set circuit. Hotel set circuit. Trouble testing. Examination. Party-line bells. No. 50-A coin machines.

Third grade (time, two weeks):

Positive supervision switchboard—
Trunk circuit. Buzzer circuit. Cord circuit. Supervisory circuit. Operator's set. Machine key tripping circuit. Relay circuit. Wring of all circuits. Trouble testing. Examination.

INSPECTORS AND INSTALLERS' SCHOOL—FIRST-GRADE EXAMINATION.

1. In what direction does the electric current flow?
2. What is a direct current?
3. What is an alternating current?
4. What are volts, amperes, and ohms?
5. What is a magnet?
6. (a). What is a permanent magnet?
(b). What is an electro magnet?
7. Diagram of No. 20 D. S. connected to 101 set.
8. Diagram of No. 20 D. S. connected to 295 set.
9. Diagram of No. 85 set.
10. (a). What is in the bell circuit?
(b). What is in the transmitter circuit?
(c). What is in the receiver circuit?

INSTALLERS AND INSPECTORS' SCHOOL—SECOND-GRADE EXAMINATION.

1. Explain the polarized bell and its operation.
2. Explain the hand generator and its operation.
3. Explain the induction coil and its operation.
4. Explain the transmitter and its operation.
5. Explain the receiver and its operation.
6. Explain the condenser, its properties, and why it is placed on the bell circuit.
7. (a). Draw a diagram of the desk-stand circuit.
(b). Draw a diagram of the wall-set circuit (No. 85 set).
8. Draw a diagram of the hotel-set circuit (No. 293-R).
9. (a). What does a side tone indicate? (D. S. Ckt.).
(b). What does no side tone indicate? (D. S. Ckt.).

40 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

10. What is the resistance of the bell winding?
What is the resistance of the receiver winding?
What is the resistance of the primary coil?
What is the resistance of the secondary coil?
What is the resistance of the transmitter?

NEW YORK TELEPHONE Co.—PLANT DEPARTMENT.

EXAMINATION QUESTIONS IN CONNECTION WITH THE SPICERS' HELPERS' SCHOOL

- 1 (a). What is a feeder cable?
(b). What is a block cable?
(c). What is a house cable?
(d). What is a trunk cable?
2. What are the two styles of terminal commonly used, and what is the rule governing their use?
3. How may a pair be distinguished in a cable?
4. What are the names by which the sides of a pair are distinguished, and give particulars as to how they are terminated?
5. What are the troubles which may result from faulty cable construction?
6. In addition to the above troubles, what are the troubles which may result from faulty splicing work?
7. What is a spare pair?
8. What is a straight splice?
9. What is a cross-connecting box?
10. What is the construction notification book in a central office used for?
11. What is a bridged pair?
12. What is indicated by the letter "B" placed before the conductor number on a cleat or form strip in a house cable?
13. What is the main frame in a central office?
14. What are the two sides of the main frame and how do you distinguish between them?
15. Why is a heat coil used and what means of protection is it?
16. How should a heat coil be placed in position?

The following is a list of the instruction books used in the plant department of a telephone company:

INSTRUCTION BOOKS—PLANT DEPARTMENT.

1. General instructions.
2. Subway cable work.
3. Block cable work.
4. House cable work.
5. Splicing.
6. Wiring.
7. Instructions for installers and inspectors.
8. Testing.
9. Trouble.
10. Booth installations and signs.
11. Wiring-plans, P. B. X. and station circuit wiring.
12. Instructions to inspectors.
13. Cable testing.
14. Instructions to wire chiefs' forces.

SERVICE INSTRUCTION OF TELEPHONE COMPANIES.

41

15. Central office tests.
16. Central office inspections.
17. Routines.
18. Reports.
19. Records.
20. Trouble and trouble records.
21. Cable work and transfers.
22. Special circuits.
23. Standard stamps and abbreviations.
24. Emergencies.
25. Power plant, central office light and power circuit.
26. Central office buildings, furniture, and fixtures.
27. Engineering bulletins.
28. Tentative instructions for placing aerial cables.

YPICAL SERVICE INSTRUCTION IN OTHER INDUSTRIES.

I. GENERAL ELECTRIC CO., SCHENECTADY, N. Y.

APPRENTICE COURSES.

Introduction.—The apprentice courses of the General Electric Co., of Schenectady, N. Y., were organized in 1901, with a view to stimulating in the minds of boys a desire to become thorough mechanics by systematic training of the mind, the hand, the wrist, and the eye in the trades of machinist, patternmaker, molder, blacksmith, and draftsman. The apprentice courses consisted at first merely of systematized training on the machine tools, but classroom work was soon added to complete the course of instruction. During the first 13 years in the history of the course the work was satisfactorily completed by 774 boys, of whom 493 were machinists.

Admission.—Each applicant for admission to the apprentice course must have a definite idea of the trade he wishes to follow, and his request for admission must be based, not on a sudden impulse, nor on the mere desire to find employment, but on repeated talks with his parent or guardian which have helped him to discover the trade that has appealed most strongly to him.

Applicants must be between the ages of 16 and 18, be able to speak, read, and write English, be of good habits, and be well recommended. All applicants must have completed the eighth grade of the elementary school.

Applications.—Applications for admission to the apprenticeship courses of the General Electric Co., at Schenectady, N. Y., may be made by the boy in person, accompanied by his parent, or by letter to the superintendent of apprentices, giving full particulars of the applicant's age, training, and reasons for seeking admission to the course. An application will not be accepted from any boy unless he has made up his mind to apply himself diligently and thoughtfully in the shops and in the classrooms to the task of making himself a more useful man to his employer, and to the community in which he lives, nor unless he has decided for himself certain rules of conduct which will establish his reputation for honesty, sobriety, and self-control in the shops and in his home. The parent of each applicant

must agree to cooperate with the superintendent of apprentices by carefully supervising the apprentice at home, by urging him to give a certain amount of time to his home work in mathematics and drawing, and by providing a consistent plan for the apprentice's recreation and pleasure. If the applicant resides in a town other than Schenectady, arrangements must be made to enable him to live with a relative or a guardian in Schenectady, who will be responsible for his welfare. At the completion of the four-year course of study, the apprentice receives a diploma and a bonus of \$100, and is given employment as a journeyman in his trade.

Course for machinists.—In the selection of applicants for the machinists' course preference will be given to those boys who are just leaving school, because they have not yet lost their habits of discipline, obedience, and study, and have not yet forgotten what they were taught in school. In the training room, which is equipped with machine tools and benches, these boys receive thorough instruction from competent teachers in the methods of machine and bench work. After completing the required time in the training room, the apprentice is transferred to one of the large machine shops, where he obtains experience in bench work and assembling work under the supervision of the apprentice department, which cooperates with the shop foreman and the instructors. The course covers four years of 2,770 hours per year, and the rate of pay is gradually increased from 10 cents an hour during the first year to 16½ cents an hour during the fourth year.

Course for patternmakers.—Apprentices in the patternmakers' course spend two years under competent instructors in the training room for patternmakers, which is equipped with machines and benches for wood patternmaking. At the beginning of the third-year the apprentice is transferred to the regular pattern department, and during this year is assigned for three months to the foundry, where he performs the same class of work as that required of the molder apprentices. This experience is needed in order that the patternmaker may become familiar with the molder's problems and thus better assist in securing good castings. The duration of the patternmakers' course and the rate of pay are the same as in the case of machinists.

Course for blacksmiths.—Applicants for admission to the course for blacksmiths are required to pass an examination in arithmetic up to and including common fractions. They spend four years of 2,770 hours per year in the blacksmith shop, where they obtain an intimate knowledge of metals, their characteristics and proper treatment in forging, welding, and tempering.

Classroom work.—Each apprentice spends about 3½ hours a week during working hours in the classroom. The subjects taught

44 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

are those related to practical shopwork, including algebra, applied mechanics, blueprint reading, and mechanical drawing. In teaching the fundamentals of mathematics, problems are taken directly from shop practice to impress the apprentices with the practical use of the principles studied. All apprentices are required to do a certain amount of home work in the way of study and making finished drawings, with a view to inculcating the habit of reading and studying at home. Apprentices are paid the same rate of compensation while at school as in the shops. If an apprentice fails to pass his school examination or fails to complete the required number of drawings, this is recorded as lost time, and will bar him from advancing to the next year's work with its increase in compensation.

Course in mathematics.—The following course in mathematics is prescribed for machinists, patternmakers, and blacksmiths:

First year:

First term—Factoring; greatest common measure; least common multiple; cancellation; fractions.

Second term—Simplification; decimals; measurement of circles; circumferential speeds; pitch and lead; shop problems.

Third term—Compound quantities; measurements (lines, arc; areas—rectangle, triangle, trapezoid, circle, sector, ellipse; volumes—solids having any of the above figures for base; angles); shop problems.

Fourth term—Metric system; board measure; general review; and shop problems.

Second year:

First term—Percentage; shop problems.

Second term—Ratio and proportion; involution; evolution; square root and applications; pulleys; gears; and shop problems.

Third term—Evolution; cube root; mensuration; triangles; trapeziums; polygons; shop problems.

Fourth term—Mensuration; cone; pyramid; sphere; shop problems; review.

Third year:

First term—Definitions; positive and negative numbers; algebraic expressions; fundamental processes.

Second term—Fundamental processes; simple equations; special products.

Third term—Factoring; greatest common divisor; least common multiple; fractions begun.

Fourth term—Fractions completed; ratio; simultaneous equations.

Fourth year:

First term—Graphs; powers; roots; radicals.

Second term—Quadratics; exponents; logarithms.

Third term—Rectilinear figures.

Fourth term—Similar triangles and circles; practical problems.

Course for draftsmen.—Applicants desiring to enter the course for draftsmen are required to pass an examination in arithmetic, including mensuration, metric system, and square and cube root. The first year is spent in the drafting room on blueprint work and tracing. The next year is spent in the shops, nine months in obtaining practical experience on machine work and assembling and three

months in the foundry. The last two years are spent in the drafting room. The course covers four years of 2,250 hours per year, and the rate of pay is increased gradually from $7\frac{1}{2}$ cents an hour during the first half of the first year to $18\frac{1}{2}$ cents an hour during the fourth year. During the first year the draftsmen receive the same classroom instruction in mathematics as the third-year machinists, and during the second year they receive the same classroom instruction in mathematics as the fourth-year machinists.

The following is the course of study in mathematics during the last two years of the course:

Plane geometry—three months.

Metric relations and constructions; applications and review; practical problems.

Solid geometry—three months.

Lines and planes in space; polyhedrons; cylinder; cone; sphere; review.

Trigonometry—six months.

Functions of acute angles; tables; solution of right angles; goniometry; solution of oblique triangles.

Descriptive geometry—six months.

Fundamentals; straight lines and planes; problems in curved surfaces.

Mechanics—six months.

Composition and resolution of forces and velocities; concurrent forces; moments; motion; work power and energy; general laws of machines.

Strength of materials—six months.

Definitions and general properties of materials; moments for beams; investigation and design of beams; column or struts; shafts; elastic deformation; concrete; combined stresses; applications.

Classroom instruction in drafting.—The classroom instruction in drafting which is provided for draftsmen, machinists, pattern-makers, and blacksmiths covers the following curriculum in four terms, each of which lasts six months:

First term:

Practice; drawing-room standards; heads and nuts; screw lines and threads; problems; conventional methods.

Second term:

Projections and development.

Third term:

Brush holder studs and connections; brush holder yokes and details; brush holder; commutator; bearing; standard; oil gage; and fittings.

Fourth term:

Assembly.

Course for molders.—Applicants for admission to the course for molders are required to pass an examination in arithmetic, including common fractions. They must be between the ages of 18 and 21 and must be strong enough physically to work in a foundry. They must also be able to speak, read, and write English. These apprentices work in the foundries and receive practical classroom instruction on foundry matters one period a week after 4 o'clock. This classroom instruction consists of special problems in arithmetic and of instruc-

tion in drawing sufficient to enable the apprentice to work intelligently from a blueprint. The course covers four years of 2,500 hours a year, and the compensation of the apprentices is gradually increased from 14 cents an hour during the first year to the standard minimum wage of a journeyman during the fourth year.

COURSES FOR STUDENT ENGINEERS.

Introduction.—Since the capitalization and the personnel of electrical enterprises have more than doubled during each of the last two decades in the United States, there is no field which offers larger opportunities to young men possessing the necessary technical training and the qualities that make for success. For success in the service of an electrical manufacturing plant or a public-service corporation there is required, however, not only the fundamental knowledge of electrical laws which is obtained in college, but also such an acquaintance with the principles of the design, manufacture, testing, and installation of electrical machinery as can be obtained only at the plant of a large electrical manufacturing corporation.

Student engineers' course.—The student engineers' course of the General Electric Co., at Schenectady, N. Y., seeks, by furnishing this practical experience to technical-school graduates, to supply competent trained men to make commercial tests of its products, to train men for the service of the company, and to give opportunities for practical shopwork to college graduates. It is a postgraduate course for designers, manufacturers, salesmen, railway engineers, and research engineers. During the last decade 3,450 engineers pursued this postgraduate course in classes varying between 200 and 400 a year, according to industrial conditions.

Entrance requirements.—Applications for admission to the student engineers' course should be sent to the secretary of the students' committee of the General Electric Co., at Schenectady, N. Y., upon blanks provided for the purpose, with a full outline of the applicant's theoretical training, practical experience, and other special qualifications. The indorsements of college officers and of other engineers should accompany the application. Students are accepted throughout the year and are assigned dates for beginning their work after they have been accepted.

Testing department.—All student engineers spend one year in the testing department before being permitted to specialize in any other department. This testing work is carried on at Schenectady, Pittsfield, and Lynn in the following activities:

Schenectady:

Industrial control, train control, compensators, experimental flow meter, measure, speed and voltage regulators, railway motors, motors and generators, medium motors, large motors, steam turbines, and government work.

Pittsfield:

Transformers, regulators, and small motors.

Lynn:

Arc lamps, C C transformers and rectifiers, switchboard transformers, motors, and steam turbines.

In addition to this regular testing work the students are also assigned to special work and for three months to night tests. They are given practice in experimental railway work, including locomotive and car testing and experimental equipment work; in the illuminating laboratory, including general illumination and the efficiency of lamps; in the standardizing laboratory on the calibration of meters, iron testing, and oscillograph work; in the consulting engineering laboratory for periods varying from one week to two months, in assembly work, in high frequency and high potential tests, in shop practice, and in mechanical drawing.

Electrical course.—During the first year the student engineer may elect either the electrical course or the electromechanical course. In the electrical course the students are afforded experience in assembling and testing all kinds of apparatus, together with control devices and auxiliaries at Schenectady and at Pittsfield. At least three months are spent at the latter place.

Electromechanical course.—The electromechanical course, which is given at Lynn, seeks to give the students an understanding of machine tools and processes and to develop their mechanical conception. Shop experience precedes work in the testing department and time is also spent in the winding, cost, and production departments, and in the drafting room. The student is given experience in adjusting and testing various types of indicating and recording instruments, in adjusting and testing arc lamps, in photometric and research work, in constant current apparatus for operating arc lamps in series, in the manufacture and testing of series mercury arc rectifiers, in work on transformers and switching apparatus, in the commercial and special testing of alternating and direct-current motors, and in building and testing steam turbines and large air compressors.

General engineering extension.—Upon the completion of one year's work in the testing department student engineers may take an extension course in general engineering or in commercial engineering, receiving payment on an hourly or a weekly basis. After the completion of this course the men are transferred to the plants of the company throughout the United States and are recommended to railway, lighting, and power companies who ask the General Electric Co. for trained men. The general engineering extension consists of a probationary period of two months, followed by three courses of three months each. The first three months after the probationary period are spent in the consulting engineering department.

The remaining six months are spent in one or two of the following departments: Transformer department, alternating current designing department, direct current designing department, railway department, power and mining department, or another of the engineering departments at Schenectady. The course includes engineering, commercial and general lectures on Saturday mornings on factory costs, production, and organization.

Commercial extension course.—The commercial extension course, which is open to graduates of the one-year course in testing, is provided for student engineers who show adaptability for commercial work. The course requires from four to eight months and classes are formed whenever a demand for men arises in the commercial department.

Lectures and recreation.—Lectures on engineering and allied subjects are provided by the company for the student engineers. The Edison Club furnishes lectures, reading room, billiards, tennis, bowling, dancing, canoeing, and club entertainments. The Schenectady Boat Club, consisting of student engineers and young men in the employ of the General Electric Co., furnishes opportunities for boating, canoeing, tennis, club entertainments, regattas, camping parties, smokers, musicals, and dances. The General Electric Athletic Association furnishes opportunities for baseball, football, running, and tennis.

COURSES FOR OFFICE EMPLOYEES

Introduction.—In addition to maintaining courses of instruction for shop apprentices and student engineers the General Electric Co., of Schenectady, N. Y., provides instruction in the evening, in cooperation with the board of education of Schenectady, for its office employees in the accounting, cost, credit, and collection departments. The purpose of the instruction, which is conducted along broad, practical lines, is to bring within the reach of the clerical employees adequate opportunities for development to enable them to meet effectively the exacting modern demands for efficient service.

Entrance requirements.—Office employees of the General Electric Co. who are 16 years of age or over are admitted to these courses without examination, with the exception that no student is admitted to the course in higher accountancy unless he has passed an examination in elementary bookkeeping following the requirements of the University of the State of New York for this subject. All students are required to pay a registration fee of \$1, which is returned at the completion of the course to all students who attend 85 per cent of the sessions of the class and who pass the examinations at the end of the course. Students must also purchase their own textbooks, but the purchase price is refunded by the company to all who qualify for the return of their registration fee. The curriculum

offers instruction in arithmetic, elementary bookkeeping, business English, typewriting, higher accountancy, and business economics.

Arithmetic.—The instruction in arithmetic is given in 20 periods of 45 minutes. Twenty minutes of each period is devoted to rapid calculation. Written tests are given every two weeks, and a rating of 85 per cent is required on the final examination at the completion of the course. Van Tuyl's Business Arithmetic is used as a textbook, and the following subjects are taught:

<ol style="list-style-type: none">1. Equation of accounts.<ol style="list-style-type: none">a. Equation of payments.b. Equation of accounts.c. Cash balance.2. Percentage.<ol style="list-style-type: none">a. Trade discount.b. Profit and loss.c. Marking goods.d. Commission and brokerage.	<ol style="list-style-type: none">3. Interest.<ol style="list-style-type: none">a. Accurate.b. Compound.c. Negotiable paper.d. Bank discount.e. Present worth and true discount.f. Partial payments.4. Stocks.5. Bonds.6. Taxes.7. Partnership.
--	--

Bookkeeping.—The instruction in bookkeeping is given in 20 periods of 45 minutes. One-half of each period is devoted to individual work. Tests are given after the study of each principle, and 85 per cent is required on the final examination at the completion of the course. The textbook used is the elementary set published by the H. M. Rowe Co., which contains the complementary work as well as the regular work. The following subjects are taught:

<ol style="list-style-type: none">1. Definitions of bookkeeping and business terms.2. Account books and their uses.<ol style="list-style-type: none">a. Purchase book.b. Sales book.c. Cashbook.d. Journal.e. Ledger.3. Classification of debits and credits.4. Personal accounts.5. Ownership accounts.<ol style="list-style-type: none">a. Capital and proprietor's personal accounts.	<ol style="list-style-type: none">6. Notes receivable and notes payable accounts.7. Cash accounts.8. Merchandise accounts.<ol style="list-style-type: none">a. Purchase accounts.b. Sales accounts.c. Inventory account.9. Property investment account.10. Operating accounts.11. Journalizing.12. Posting and checking.13. Trial balances.
--	--

Business English.—The instruction in business English is given by means of written papers and individual work in 24 periods of 45 minutes. There are tests in the correction of common grammatical errors, a mid-course examination, and a final examination on which 85 per cent is required. Davis & Lingham's Business English and

50 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

Correspondence is used as a textbook, and the following subjects are taught:

<ol style="list-style-type: none">1. The aim of business English.2. Review of grammatical principles.<ol style="list-style-type: none">a. Parts of speech.b. Sentences.c. Verbs.3. Punctuation.4. Spelling and uses of words.5. Fundamental principles of composition.<ol style="list-style-type: none">a. Unity.b. Coherence.c. Emphasis.<ol style="list-style-type: none">(a) In sentence structure.(b) In paragraph structure.	<ol style="list-style-type: none">6. Form of a letter.<ol style="list-style-type: none">a. Paper.b. Parts of a letter.7. Letter of application.8. Buying letter.9. Selling letter.10. Letters of introduction and recommendation.11. Collections.12. Advertisement.13. Reports and summaries.
--	---

Typewriting.—The instruction in typewriting is given in 40 periods of 45 minutes, with a portion of the time devoted to individual work. In addition to monthly tests there is a final examination at the end of the course on which 85 per cent is required. Fritz Eldridge's Typewriting Manual, published by the American Book Co., is used as a textbook, and the following subjects are taught:

<ol style="list-style-type: none">1. Machine.<ol style="list-style-type: none">a. Mechanism.b. Care.2. Operation.<ol style="list-style-type: none">a. Keyboard drill.<ol style="list-style-type: none">(a) Four-finger method.(b) Three rows of keys learned.b. Review of keyboard.3. Word drill.<ol style="list-style-type: none">a. Practice in going from one bank of keys to another.4. Capitals and paragraphing.<ol style="list-style-type: none">a. Use of tabulator key.b. Rules for spacing after punctuation.5. Letters and drills.<ol style="list-style-type: none">a. Salutations and complimentary closings.b. Words and phrases.6. Figure drills.7. Letters and drills.<ol style="list-style-type: none">a. Including characters.	<ol style="list-style-type: none">8. General information.<ol style="list-style-type: none">a. Punctuation rules.b. Capital letters.c. Division of words.d. Figures (when and how used).e. How to make corrections.f. Instructions in erasing.g. Signs not on keyboard.h. Sizes of commercial envelopes.i. Sizes of typewriting paper.j. Hints regarding stencils.k. Proof-reading signs.l. Forms of address.m. Abbreviations.n. Double titles.o. Stenographer's initials.p. Inclosures.q. Bottom margins.r. Addressing envelopes.s. Short letters.t. Heading second sheets.
--	--

Higher accountancy.—The course in higher accountancy will furnish instruction in the following subjects:

<ol style="list-style-type: none"> 1. Review of the principles of accounting. <ol style="list-style-type: none"> a. Value of chief books of account. <ol style="list-style-type: none"> (a) Closing of these books. (b) Detection of errors. b. Trading statement. <ol style="list-style-type: none"> (a) Gross trading profit. c. Profit-and-loss statement. <ol style="list-style-type: none"> (a) Classification of expenses. (b) Net profit. (c) Dividend. 2. Statement of resources and liabilities. <ol style="list-style-type: none"> a. Current. b. Fixed. c. Contingent. 	<ol style="list-style-type: none"> 3. Manufacturing accounts. <ol style="list-style-type: none"> a. Plant. b. Materials. c. Labor. d. Factory expense. 4. Cost accounting. <ol style="list-style-type: none"> a. Direct charges. <ol style="list-style-type: none"> (a) Material. (b) Direct labor. b. Indirect charges. <ol style="list-style-type: none"> (a) Factory. (b) Overhead expense. 5. Distribution of indirect expenses. 6. Departmental manufacturing accounts.
--	--

Business economics.—The course in business economics comprises the general principles of corporation finance and organization, and special studies in the organization, routine, sales, and accounting classifications of the General Electric Co.

II. THE LAKESIDE PRESS, CHICAGO, ILL.

Vocational guidance.—Most boys when they reach the age of 14 years are forced by circumstances to become wage earners. They have had no special preparation in the schools for an industrial career, and generally receive no guidance while attempting to adjust themselves from the 75 per cent standard of efficiency in the schools to the 100 per cent business standard of efficiency. During the first two years of their business life most boys are employed in running errands or in performing other odd jobs which do not give them any training of value to them, and as a natural result the average boy considers that job best which pays the highest wages for the least work.

The printing trade.—In selecting their first jobs boys should endeavor to avoid the blind alley of incidental employment and seek work which is interesting to them and which offers them special training and opportunities for advancement. Printing, which ranks sixth among the important occupations of the world, has always attracted the better class of boys. The wages paid are high, and the work continues fairly constant throughout the year. The energetic and skilled workman has many opportunities to advance himself to foreman, superintendent, or manager, and the demand for skilled

workmen is so great that employers are giving much thought to the training of apprentices.

School for apprentices.—Under modern factory conditions the workmen are either too busy or have no inclination to be bothered by apprentices. Apprentices in a factory accordingly receive only such training as they can pick up by imitating the workmen beside whom they work. To furnish to its apprentices better and more systematic training, the Lakeside Press, of Chicago, established a school for apprentices in 1908, which furnishes the following advantages to boys: They learn the trade after they have entered the business; they receive wages while learning; their work is real and not theoretical; and they are under the supervision of an instructor during their shop-work. A special room is provided for the school, with one part equipped as a schoolroom and the other as a model composing room. The boys are in charge of instructors who devote their entire time to the school. The supervisor of the school teaches the academic work, and exercises general oversight of the boys in the factory; an instructor in design has charge of the work in design; and an instructor in printing has charge of the trade instruction.

Admission requirements.—Applicants for admission to the Lakeside Press School for Apprentices must be grammar-school graduates between 14 and 15 years of age. Their school record must show good standing, and a physical examination may be required. Good moral character and a desire to learn the printing trade are essential, and the boy's parents must promise to cooperate with the school in looking after his welfare. Application for admission to the school should be made by letter. The supervisor of the school interviews the applicant and visits his parents, and if the boy appears to be satisfactory, he is given a fair trial. If both the boy and the supervisor of the school are satisfied by this trial, an agreement is entered into between the Lakeside Press, the boy, and his parents for a two-year preapprenticeship course.

Preapprenticeship term.—By the terms of the preapprenticeship agreement the firm agrees to teach the boy for two years; the boy agrees, if his services are satisfactory to his employer, to contract for five additional years as a full apprentice in the department which the firm deems best suited to his ability; and the parents agree that the boy will remain until he has learned the trade. During the preapprenticeship period the boys spend half time in the school and half time in the factory, spending three and one-half hours daily in the school and four and one-half hours daily in the shop. The boys are paid \$2.40 per week the first year and \$3 per week the second year, which is at the rate of 10 and 12 cents per hour, respectively, for the time actually spent in the factory by the boys during these

two years. Two weeks' vacation, with pay in advance, is allowed each boy whose average standing for the year is 95 per cent or above.

Course of study.—Arithmetic is reviewed from the factory side by means of an applied arithmetic prepared for this review work. Elementary bookkeeping is taught by means of lessons especially arranged for the printing office. The elements of algebra and geometry are taught, with problems applied to the trade. Every apprentice is required to read and review at least six books of standard literature each year. The lessons in design are applied in the written as well as printed work in all the different subjects. Every exercise is a lesson in English. The rules laid down for good book work are followed in all written work, and proof marks are used in correcting all exercises. No poor work is accepted. The boys are also given in the schoolroom graded lessons in setting type, reading proof, locking up small forms, and taking proofs. The standard is high and there is a carefully estimated time on each job. The habits of work are regarded probably as more important than the work itself, because it is believed that one who has become efficient in one thing readily learns to become efficient in other things. When the student has completed his exercises he is given commercial work. Real work has greater educational value in developing a skilled workman than work intended for the waste basket.

Factory work.—The boys work in relays in the factory. They are given work in the different departments in order that they may learn something of each of the various branches of the trade, and ultimately select the particular department they will enter and the line of work they will follow as a trade. The hours spent in the shop accustom the apprentices to factory work—to be on time, to be systematic, and to receive and carry out instructions promptly. These principles are quickly instilled in their minds when they enter a large workroom and work side by side with men. During the pre-apprenticeship period a well-rounded course rather than specialization is the aim, in order to insure a good foundation for advanced work during the apprenticeship.

Apprenticeship term.—Upon completing the preapprenticeship course the boys at the age of 16 enter the factory as regular apprentices to learn some one of the trades of the printing business. The academic training begun during the preapprenticeship course is continued during the apprenticeship; the boys attend school for several hours each week and receive regular pay. New subjects are added to the course of instruction. Much attention is given to designing, layouts for jobs are made and are carefully criticized after being carried out in type. Mechanics, industrial history, English, hygiene, and economics are taught. In the shops apprentices are given an opportunity to specialize in any one of the many branches of the

~~THE SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.~~

printing business—hand composition, linotype operating, monotype operating, bookbinding, feeding, press work, photo-engraving, lithograph work, photogravure, or offset work. Instruction in applied design, lettering, and the theory of color is given in the school, and in the shop the boys are given commercial work as far as possible, to make them realize that only good work will be accepted, and that to become efficient workmen, they must center their attention upon the work in hand.

Reports.—The supervisor cooperates with the parents of the boys by means of monthly reports and occasional visits. A descriptive report, a report of standings, and a graph of the average monthly standings are sent to the parents every month. All standings are based upon the quality and the quantity of work done. Time limits are set on each job or assigned task, according to past experience. If the jobs are performed within the time limit set and the quality of the work is up to the standard of the department, a credit of 100 is given, which means work satisfactory both as to quality and quantity. Since the quality must be up to the standard, the standings become largely a time basis record. Above 100 indicates excellent work, standard quality in less than the time limit set; 95 is the bonus standard; 90 indicates fair work, and 85 or less failure. Standings of less than 100 indicate that more than the time limit was taken to perform the job. In determining the averages, trade work is given a weight of 5, academic work a weight of 3, and deportment a weight of 2.

III. METROPOLITAN LIFE INSURANCE CO.

Introduction.—The service instruction of the Metropolitan Life Insurance Co. consists of a correspondence course of 10 lessons in the principles of life insurance for its agents and home office employees, the distribution among its employees of the large number of leaflets on health and hygiene published from time to time for the company's industrial policy-holders, classroom instruction in stenography for beginners and in mathematics for applicants for actuarial positions, systematic instruction in gymnastics and recreational activities for men and for women, and instruction in singing.

Correspondence course.—Each newly appointed agent is carefully instructed in the daily routine of his duties by his superintendent, who gives him individual instruction in the field. A biweekly publication of the company, called the Intelligence, seeks to impart instruction in salesmanship and to cultivate a company spirit in the agency force. On the completion of his sixth month of service the agent is enrolled in the correspondence course in the principles of life insurance.

This course consists of 10 lessons, which cover the subjects of mortality, interest, construction of a premium, and an analysis of the

several types of policies and plans of insurance. Each lesson, prepared in the form of a booklet of about 15 pages, has been written in a clear, simple, nontechnical style. The lessons are sent to the agents one at a time. A special blank is provided, on which each agent is required to send to the home office his answers to the questions printed at the end of each lesson. He is also encouraged to ask questions on the subject matter of the lesson. The answers are rated, and the corrected and annotated answer sheets are returned to the agents. A record of the work done by each agent is kept at the home office, and a diploma is issued on the satisfactory completion of the entire course. By holding conferences on the subject matter of each lesson, the superintendents in the field frequently supply that personal instruction the absence of which is the chief defect of correspondence instruction.

This correspondence course of instruction has greatly increased the efficiency of the agency force by increasing their knowledge of the underlying principles of life insurance, and by enabling them to answer more satisfactorily specific inquiries of the prospects. It has also increased the efficiency of the agency force by increasing the persistence of the graduate agent in the life insurance field. Of 10,860 agents in the employ of the Metropolitan during the calendar year 1913, more than 50 per cent were separated from the service. Of the 1915 agents who graduated from the correspondence course prior to January 1, 1914, more than 85 per cent are still in the employ of the company.

Distribution of literature.—With a view to reducing the mortality among its 8,000,000 industrial policyholders, the Metropolitan Life Insurance Co. publishes and distributes each year a vast quantity of literature relating to subjects of health and hygiene. The systematic distribution of this health literature among its employees gives them a valuable course of instruction in such subjects as the health of the worker, teeth, tonsils and adenoids, scarlet fever, smallpox, typhoid fever, consumption cures, sleeping in the open air, hygienic drinking cups, clean milk, flies, etc.

Classroom instruction.—The Metropolitan Life Insurance Co. offers two courses of systematic classroom instruction to such of its employees as may seek higher positions. For applicants for actuarial positions it maintains two classes in mathematics, each of which had about 20 students in 1913. The elementary class covered Hall and Knight's College Algebra from factoring to progressions (cha. 10 to 33); and the advanced class covered almost the whole of Hall and Knight's Higher Algebra. For such of its clerks as may seek advancement to a stenographic position, a class in stenography is maintained, in which there were 204 students in 1913. No specific course of study is provided for this class. It is essentially a speed

50 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

class, to enable candidates for stenographic positions in the company's service to keep in practice, improve their speed, and acquire familiarity with the phrases used in the company's correspondence.

Recreational instruction.—To stimulate interest in recreational activities which are so much needed by men and women who are engaged in the sedentary pursuits of office work, the Metropolitan has organized an athletic association, a glee club, and a choral society. The athletic association, which has a membership of 750, has supervision over the gymnasium, organizes tennis teams, baseball teams, football teams, basketball teams, and handball teams, makes arrangements for interdepartmental games and tournaments, and holds an annual field day at which there is usually an attendance of about 5,000 persons. At the 1913 field day over 200 participated in 12 events for men and 2 for women. Three prizes were awarded for each event. An instructor is employed by the company to give systematic instruction in physical exercise in the gymnasium to the men and the women of the clerical force on alternate afternoons. On the same floor with the gymnasium is a large auditorium, with a piano, which is used by the girls for dancing during the luncheon period every day and which is also used for concert purposes by the Men's Glee Club and the Women's Choral Society.

IV. D. E. SICHER & CO., NEW YORK.

Introduction.—D. E. Sicher & Co., of New York, manufacturers of muslin underwear, give to their employees systematic instruction in hygiene and safety matters, co-operative day-time factory classes, illustrated noon-hour lectures and recitals, and Saturday afternoon instruction in dressmaking.

Hygiene instruction.—Instruction in matters of hygiene is given to the employees in three ways. A service director is employed who is a trained nurse and who, being given the freedom of the factory, comes daily and continuously into contact with the employees and has the opportunity to give personal instruction whenever necessary. Printed directions are posted throughout the factory to warn the employees of the importance of following the instructions given in matters of hygiene. The following is an example of these:

COOPERATION MEANS SUCCESS.

CONSIDER YOUR OWN HEALTH AND THE HEALTH OF OTHERS.

THESE TOILETS ARE CLEANED FOR YOU.

PLEASE KEEP THEM CLEAN. THROW NOTHING ON THE FLOOR.

D. E. SICHER & CO.

Hygiene instruction is also given to the employees by the house organ, "Threads and Thoughts," which is published monthly and which always contains one or two articles on this subject, such as "Care of the hair," "Massage for the scalp," "Care of the skin," "Care of complexion," etc.

Safety instruction.—Safety instruction is given to the employees in four ways. Fire-drills are held monthly and a careful permanent record is kept of each drill, giving the date, the time ordered, seconds required to empty the building, minutes required to return to work, and general success of the drill. The employers, at irregular intervals, make addresses on safety subjects during the noon hour. Safety instructions are posted throughout the factory. Finally, individual care and caution in the operation of sewing machines is insisted upon by the firm's machine instructor.

Day-time factory classes.—This firm has also established day-time factory classes in an effort to eliminate illiteracy among the foreign-born employees. The following course of study is given to these day-time factory classes:

I. English language:	2. History.
1. Reading.	a. Origin of legal holidays.
2. Spelling.	b. Lives of statesmen.
3. Writing.	IV. Mathematics:
4. Geography.	1. Four fundamental operations in arithmetic.
5. Methods of communication—	2. Tables of weights and measures.
a. Correspondence— (a) Business letters. (b) Social letters. (c) Post-office regulations.	3. Money (bills and currency).
b. Telephoning.	4. Work reports.
c. Telegraphy.	5. Personal-expense accounts.
II. Hygiene:	6. Bank accounts.
1. Personal cleanliness.	V. Practical application of language:
2. Physical culture (gymnastics).	Evolution of an undergarment.
3. Food (nutritive value).	a. Growth of cotton plant.
4. First aid to injured.	b. Manufacture. (a) Spinning operation. (b) Bleaching operation.
III. Civics:	c. Shipping.
1. Systems of government.	VI. General information:
a. Merits of democratic government.	Alphabet as a guide to common things.
b. Patriotism.	a. Advertisements.
c. Citizenship.	b. Dictionary.
	c. Directory.

Noon-hour lectures.—In addition to the instruction given in the day-time factory classes, which is thoroughly practical and closely correlated to the life and the work of the employees, illustrated lec-

tures of an educational and recreative character are furnished to the employees during the noon hour. During the past year there have been lectures on such subjects as the "Panama Canal," "California," "Wonders of New York," "Meaning of the Dance," and fire prevention. There have also been vocal music, violin, and graphophone recitals.

B

SERVICE INSTRUCTION OF THE CITY OF NEW YORK.

POLICE SERVICE INSTRUCTION.

1. *Introduction*.—Until a comparatively recent date police recruits in New York received no formal instruction other than catechetical instruction in the rules and regulations of the department in the police school for recruits.¹

Commissioner Arthur Woods in 1914 reorganized the school for recruits as the New York Police Training School and placed in charge of this school Inspector Cornelius Cahalane, who is regarded as one of the ablest police instructors in this country. The inspector has planned and developed the curriculum of the training school with a view to training and fitting the 11,000 members of the uniformed force in the performance of their duties. Every rank in the department must attend the school at some time during the year for the purpose of receiving instruction in the duties of that rank.

2. *Course for probationers*—

The probationers are assigned to the training school for three months, during which time they are instructed in the ordinances of the city, rules and regulations of the department, laws of the State, and usages and customs of the department. They are taught in the school of the soldier to drill, wrestle, box, scale ladders, and are given exercises for the care of the feet. Each probationer is taught the care and use of firearms, an hour and a half each week being devoted to the subject. Those who can not swim are given this instruction in the swimming pool and, when the weather permits, in the New York Harbor. Every man is taught to ride a bicycle and a motorcycle. They are taught the distinctive characteristics of the various makes of motor vehicles so that they may be able to identify them.

To test their efficiency and their adaptability to police work they are given oral and written examinations every two weeks on subjects which have been under discussion.

After the probationers leave the school and before they end their probation they are required to report to the training school one day each week, where their instruction is continued.

¹ Police administration, p. 106.

3. *Practical instruction.*—While attending the New York police training school recruits receive the following practical instruction:

(a) At night they are assigned to a busy precinct and are required to accompany the patrolman assigned to house duty on all cases requiring police attention.

(b) On each Saturday and Sunday night they are assigned to patrol duty with a superior officer, who instructs them in the manner of performing patrol and the customs and usages of a patrolman.

(c) Several times during the course they are assigned in pairs on busy streets for the purpose of observation; they are visited by an instructor to whom they report violations of law observed by them, conditions requiring police attention, and places to be investigated with reference to their licenses.

(d) Lectures on first aid to the injured are given by police surgeons.

(e) Lectures and practical demonstrations on the importance of preserving finger impressions and on descriptive portrait identifications are given by officers of the detective bureau.

(f) They are sent out on the street to obtain cases for presentation at moot courts and are also assigned several times during their course to visit the day and the night courts to observe the manner of arraigning prisoners and presenting evidence.

(g) Each morning they attend the line-up of arrested criminals at headquarters and the lectures by detectives specializing in particular crimes.

4. *Physical instruction.*—Each recruit in the New York police training school devotes one and one-half hours each day to physical instruction, which includes the following:

(a) The setting-up exercises and the school of the soldier of the United States Army.

(b) The most approved methods of handling prisoners humanely and breaking holds of prisoners by means of the American and the Japanese methods of wrestling.

(c) Manner of scaling fire-escape ladders from sidewalk and of carrying unconscious or dead persons up and down ladders.

(d) Each recruit is given one hour of instruction each week in swimming and in rescuing drowning persons.

(e) Each recruit is instructed in the care and use of revolvers at a rifle range in police headquarters and is given during his course 20 rounds of five shots at a target, with 4-inch bull's-eye at 15 yards' distance.

5. *Mental subjects.*—The curriculum of the New York training school consists of the following subjects, which have been arranged

in the order of their importance and the amount of time devoted to each:

a. Report making.	l. Felonies and misdemeanors.
b. Traffic and animals.	m. Children.
c. Arrests.	n. Patrol.
d. Sanitary code and nuisances.	o. Disorderly conduct.
e. Burglary.	p. Assault and weapons.
f. Crime classification.	q. Court procedure.
g. Robbery and larceny.	r. General ordinances.
h. Homicide.	s. Malicious mischief.
i. Public morals.	t. Election law.
j. Observation.	u. Deportment.
k. Fires and accidents.	v. Sabbath law.

6. Courses for officers.

Sergeants and lieutenants on the list for promotion are brought to the training school, where they remain for two weeks to receive practical instruction in the duties of the rank to which they aspire.

Once each year every sergeant and lieutenant in the department is relieved from all other duty and brought to the training school, where he receives instruction in the laws and ordinances, rules and regulations, and customs and usages of the department, so that police work throughout the city may be kept uniform.

7. Other courses.—The training school also offers special courses of instruction to patrolmen who wish to qualify for assignment to the traffic division, to those who wish to become motor cycle men, to detectives, to those who wish to receive instruction in revolver shooting or to qualify as marksmen, and to those who want physical training, instruction in the humane handling of prisoners, the most efficient methods of self defense or the principles of first aid to the injured.

The director of the training school also edits the monthly Police Bulletin, which is distributed to each member of the force and which seeks to give instruction on subjects of timely interest in the field of police administration, and Inspector Cahalane has also organized a course of study for the large number of patrolmen who compete every fourth year in the competitive civil service examinations for promotion to the rank of sergeant. This instruction is given to the patrolmen throughout the year during their time off in station houses throughout the city and covers systematically and thoroughly the four subjects of the civil service examination—the laws and ordinances of the city, the rules and regulations of the department, problems of police administration and the writing of a report on an assigned police subject.

SERVICE INSTRUCTION OF FIRE DEPARTMENT.

1. *Introduction.*—Service instruction is given to members of the uniformed force of the New York fire department by the fire college. This college was established by General Orders No. 72, dated December 28, 1910. The purpose of this college is to disseminate knowledge of fire fighting, to establish and maintain the highest professional standards, and to afford men starting in the profession of fire fighting the advantage of the experience of men who have devoted their lives to this profession.

The fire college is administered subject to the control of the fire commissioner by the fire college board, of which the chief of department is president. At the conclusion of each course of instruction, the fire college board holds examinations and reports to the commissioner the names of those who have successfully completed the course to the satisfaction of the board. The board also makes to the commissioner from time to time recommendations for increasing the efficiency of the department and of the college.

The New York fire college consists of the four following schools: (1) Officers' school; (2) engineers' school; (3) probationary firemen's school; (4) company school.

The fire college maintains courses in the following subjects: (1) General fire fighting; (2) use of apparatus and tools; (3) engines and boilers; (4) use of high-pressure systems; (5) marine fires; (6) care of horses; (7) care of hose; (8) sapping and mining; (9) high tension electric currents; (10) combustibles and explosives; (11) gasoline motor engineering; (12) fire-alarm telegraph (including auxiliary systems); (13) auxiliary fire appliances; (14) first aid to injured; (15) discipline and administration.

2. *Officers' school.*—All officers of the department, except members of the fire college, and all engineers and firemen who are eligible for promotion to the rank of assistant foremen, shall be required to attend the officers' school under such rules and regulations as may from time to time be established by the board.

In so far as practicable no officers, or engineers, or firemen will be promoted unless they have successfully concluded this course of instruction to the satisfaction of the board.

Instruction in this school will be given by section. Sections will consist of 25 members, and will be announced from time to time in special orders of the department. Sections will be required to attend three times a week from 10 a. m. to 1 p. m. for a period of six weeks. Two sections will be under instruction at the same time on alternate days. On sections completing the course, new sections will be formed.

The subjects taught in the officers' school are highly technical. The courses of instruction deal principally with the strategy or

deployment of apparatus at fires; the construction of buildings, shafts, and stairways; conditions encountered at fires, such as back drafts and explosions caused by the storage of heat; chemistry in its relation to fires; cotton smoke, wood smoke, jute, acids, etc.; the effects of imperfect combustion, and the ventilation of buildings.

3. *Engineers' school.*—All engineers will be required to attend this school. Firemen of the first and second grades upon their own application, approved by the board, will be granted permission to attend this school. In so far as practicable, no fireman will be promoted to the grade of engineer unless he has successfully completed this course to the satisfaction of the board.

The course of instruction in this school will be limited to an extended course in engines and boilers and gasoline-motor engineering, including the technical construction, care, and operation of steam and motor engines.

4. *Probationary firemen's school.*—All probationary firemen will be required to attend this school for a period of at least 30 days upon their appointment as probationary firemen. The instruction in this school shall be limited to practical instruction in the use of tools, scaling ladders and other life-saving appliances, and elementary instruction in first aid to the injured.

No probationary fireman will be appointed who has not completed this course to the satisfaction of the board.

5. *Company school.*—All companies will be required to attend this school, with their entire complement of officers and men, at such time and place as the board may from time to time direct. The course of instruction in this school will include use of apparatus and tools, and for engine companies will also include engines and boilers.

The instruction in this school consists of the performance, under direction, guidance, and criticism of evolutions covering the actual work performed at fires.

At the end of the instruction each company is required to perform the following 20 evolutions, and a record is kept of the time required for each evolution:

EVOLUTIONS USED IN COMPANY SCHOOL.

No. 1. Hoist line to roof outside of building, make line fast under cornice and on roof with approved knots.

No. 2. Remove burst length from line between fourth floor and roof and between fourth floor and street; replace with new lengths.

No. 3. Stretch two 8-inch lines from high-pressure hydrant and connect to standpipe; fire on sixth floor.

No. 4. Stretch 8-inch line from high-pressure hydrant, connect to standpipe floor valve inside of building; outside connection is out of order.

No. 5. Stretch three lines and make connections to turret pipe on hose wagon and operate same with proper size nozzle.

64 SERVICE INSTRUCTION OF AMERICAN CORPORATIONS.

No. 6. Stretch two lines, connect to rail pipes on hose wagon and operate with proper size nozzles.
No. 7. Stretch 8½-inch line from fireboat and connect to high-pressure hydrant.
No. 8. Stretch 3½-inch line from high-pressure hydrant and connect to water tower.
No. 9. Siamese two 2½-inch lines with one 3-inch lead line, put on Perfection pipe holder and proper size nozzle.
No. 10. Stretch in as many 2½-inch lines as possible to lead out with one 3½-inch line; put on Eureka pipe holder and proper size nozzle.
No. 11. Stretch 3½-inch line with three 2½-inch leading lines which can be controlled independently.
No. 12. Stretch 3-inch line, put on Paradox pipe holder, with proper size nozzle.
No. 13. Stretch 3-inch line and put on street pipe and stick, with proper size nozzle.
No. 14. Stretch line by ladder to third floor and place line in proper position to operate through window, and fasten with ladder strap.
No. 15. Stretch lines and make connections to cellar pipe, subcellar pipe, Baker pipe, Hart pipe, and distributors, and operate same.
No. 16. Make proper connection to take suction, and place fresh-water feed in service at fire.
No. 17. Hoist 35-foot ladder to roof, and lower same to yard.
No. 18. Raise and lower 35-foot ladder.
No. 19. Raise and operate aerial ladder.
No. 20. Discharge life gun, and throw line to roof.

On December 6, 1915, Engine Co. No. 20, consisting of 2 officers and 13 men, succeeded in performing these 20 evolutions in 17 minutes and 45 seconds, as follows:

Engine Co. 20, 2 officers and 13 men.

December 6, 1915.

Movement.	Time.	Movement.	Time.
No. 1	.02	No. 12	.23
No. 2	.51	No. 13	.23
No. 3	1.01	No. 14	.38
No. 4	.48	No. 15	.26
No. 5	.40	No. 16	.33
No. 6	.30	No. 17	2.18
No. 7	.46	No. 18	.37
No. 8	.43	No. 19	1.04
No. 9	.28	No. 20	1.12
No. 10	.57		
No. 11	.25		
			17.45

SERVICE INSTRUCTION OF STREET CLEANING DEPARTMENT.

1. *Introduction.*—The formulation of service instruction for the employees of the street cleaning department presented many points of difficulty, because the work of these employees is largely manual in character; it has always been unstandardized, and many of the employees are illiterate. In the system of service instruction which was installed under the direction of Commissioner John T. Fetherston each of the manual operations was standardized and a leaflet of

instructions on these standardized operations published for the information of the officers of the department. It was made the duty of the officers to impart this information to the men under their charge in accordance with the following order of the commissioner:

Employees must be properly trained to handle the tools and perform the work strictly in accordance with these instructions.

Officers will be held directly responsible for instructing the men daily at the section stations, stables and on the work, repeating the instructions until the definitions become second nature to the employees.

J. T. FETHERSTON, Commissioner.

May 1, 1915.

2. *Formulation of standard methods.*—The service instruction of the street cleaning department is based upon the standard methods for performing each routine operation which were formulated by a committee of the ablest and most experienced officers of the department appointed by the commissioner for that purpose. After having been revised and approved by the commissioner, these standard methods were published in a series of pamphlets and promulgated to the uniformed force. Pamphlets were prepared on the following subjects:

- (1) Definition of terms for department employees.
- (2) Orders on standard methods for hand sweeping.
- (3) Orders on standard methods for hand flushing.
- (4) Orders on standard methods for litter.
- (5) Orders on standard methods for refuse collection.
- (6) Orders on standard methods for rotary sweeping machines.
- (7) Orders on standard methods for squeegees.
- (8) Sick horses: How to prevent; how to tell; and what to do.
- (9) Orders and instructions for contract snow removal.
- (10) Regulations and instructions for the snow fighting force.
- (11) Regulations and instructions governing keeping of time records.
- (12) Standard orders for seizing incumbrances.
- (13) Shop regulations, orders and instructions.

DETAILED INSTRUCTIONS FOR FLUSHING GANGS (TWO-MAN GANGS).

Take equipment to route assigned by officer at time specified. Look over route, and be sure that there is no litter or other heavy material on the street. Coil hose on carrier so that it will uncoil easily. Have nozzle end on top. Start to unreel hose at a point 100 feet before you get to first hydrant, if using two lengths, or 150 feet with three lengths, etc.

Nozzle man.—Take off nozzle end and hold it.

Hydrant man.—Drag carrier to hydrant, unreeling hose as you go. Put carrier on sidewalk, 10 feet from hydrant toward nozzle, out of the way of traffic. Take off hydrant cap. Pick up end of hose; throw as much of it into gutter or

on sidewalk as possible. Couple hose to hydrant tightly. Always make sure a washer is in coupling to prevent leakage. Keep kinks out of hose. Put hydrant key on nut at top of hydrant and look to nozzle man for signal.

Nozzle man.—When hydrant man is connecting hose to hydrant, straighten out your end of hose. Put it in gutter, near curb or on sidewalk. Pick up nozzle, take a position in the middle of street as far from hydrant as hose will reach. Open shut-off key on nozzle. Give signal to hydrant man to turn on water.

Hydrant man.—Turn hydrant key to right, the way hands of a clock move. Turn key slowly; if it sticks so you can not open it, leave hydrant alone and report it to foreman. (The hydrant valve stem can be easily broken if forced too much. Turning on water too suddenly may damage water system or throw nozzle man off his feet.) When water is turned on, stop any spraying from hydrant or hose couplings onto sidewalk. Put in a new washer or use spray shield over hydrant nozzle.

Go behind nozzle man and help him. When moving pick up hose in loop and take the weight off nozzle man; keep all the hose you can off the ground when moving forward.

Nozzle man.—Be sure to open a shut-off nozzle before water is turned on, so air can escape freely. Direct water toward pavement until stream has become steady. Start spraying on part of street farthest from hydrant and work toward hydrant by turning in your place, sprinkling the whole pavement as far as stream will reach, unless wet by rain or sprinkling cart. Do this without changing first position. (This spraying softens hardened refuse that sticks to pavement.) Use as little water as possible doing this.

Start on part first sprayed and flush. Follow line of spraying to let dust soak as long as possible. Direct stream against pavement to strike it about 6 feet away. Wash pavement from center of roadway to curb. Swing stream back and forth, raising it to follow mud wave at all times. Drive everything to gutter. Move so that you can wash it there. When finished with a section of street, move ahead and take another.

Always spray as far ahead as you can before flushing a new section. Work close to yourself when flushing. Then work as far as stream will do effective cleaning. Continue this way until limit of hose is reached. When nearly finished, signal hydrant man to go to hydrant. When finished, signal to shut off water.

Hydrant man.—Go to hydrant and shut off water when signaled. In shutting off hydrant, do not hurry. Quick shutting off of hydrant is dangerous and unnecessary. Disconnect hose and throw the end on ground to allow it to drain.

Look into hydrant nozzle and see if hydrant is draining properly. If hydrant is not shut off, something may be under valve. Open hydrant a few turns to wash material out. Then shut it again. Try this two or three times, and if you can not shut off water or the hydrant does not drain properly, notify foreman on his next round or when you go to section station.

Never use too much force; a strong man will twist the stem. If hydrant is draining properly, screw cap on nozzle. Help nozzle man coil hose. Drag carrier toward next hydrant on route. In winter always pump out hydrant if it does not drain quickly, and throw into it a handful of salt to prevent freezing.

Nozzle man.—When water is shut off, put nozzle on ground where it will not be run over by traffic; go to the hydrant end of hose and help coil it on carrier. When reeled on carrier, then go to proper distance from next hydrant and repeat same operations over again.

Always keep stream behind dust at all times and work it as fast as possible toward the gutter. Flush with grain of rough block pavement to clean out crevices. Flush with the grade of streets at all times, no matter how slight, unless otherwise ordered. If possible, flush with wind, so stream will not turn to spray before it strikes pavement. When using shut-off nozzle never let water run unless you are working with it. Shut off slowly. Use shut-off when moving ahead or when blocked by traffic.

When about finished with flushing, before going to section station, drain hose thoroughly by lifting it, beginning at the middle, and each man working toward each end of hose. Be sure all your equipment is on carriage before turning in at section station. Notify foreman if anything is missing or injured.

DON'T'S.

1. Don't waste water.
2. Don't flush dirt into sewer catch basins.
3. Don't forget to keep stream behind dust at all times.
4. Don't forget to close hydrants after using them.
5. Don't use too much force to open hydrants.
6. Don't forget to flush with the grain of rough block pavement to clean out crevices.
7. Don't forget to stop spray from hydrant, hose coupling, or break in hose. Use spray shields.
8. Don't forget to open a shut-off nozzle before water is turned on.
9. Don't turn on water too suddenly.
10. Don't let too much hose drag when moving forward.
11. Don't forget to keep hose and carrier out of way of traffic.
12. Don't forget to shut off nozzle when blocked by traffic; when horses become frightened; when not working with it.
13. Don't forget to report damaged or poor hydrants and depressions in pavement promptly to foreman.
14. Don't forget to drain hose after finishing your work.
15. Don't forget to keep moving while using the water.

3. *Regulations.*—In addition to publishing pamphlets containing the standard methods for performing each of the routine operations and requiring that the men be instructed by their officers in these standard methods in a school for recruits, in the section stations and on the work the following additional pamphlets have been promulgated to the force as a part of the service instruction system:

- (1) Laws and ordinances relative to the cleaning of streets and sidewalks and the disposal of refuse [20 pp.].
- (2) Duties and responsibilities of medical examiners in sickness and injuries [8 pp.].
- (3) Duties and responsibilities of chief veterinarian and veterinarians [8 pp.].
- (4) Code of discipline [11 pp.].

SERVICE INSTRUCTION FOR CLERICAL EMPLOYEES.

1. *New York University.*—The first attempt to furnish service instruction to the clerical municipal employees of New York was made by New York University in 1914. Extra-mural courses of collegiate

rank were planned to meet the special needs of these employees and were given in the Municipal Building in which the city departments are located. These courses of instruction were given from 4 p. m. to 6 p. m., so that one-half of the instruction was given on the city's time from 4 p. m. to 5 p. m. and one-half on the employees' time from 5 p. m. to 6 p. m. A charge was made for tuition.

Courses of study were offered in stenography, typewriting, secretarial methods, civil government, accounting, engineering, mathematics, and other similar subjects.

During the year 1915 the number of the courses was increased, and all of the courses were given on the employees' time from 5 p. m. to 7 p. m.. Fees were again charged for tuition.

2. *College of City of New York*.—In 1916 Mayor John Purroy Mitchell appointed a committee of prominent merchants and manufacturers of this city to make a careful study of the training of men and women for the municipal service. President Mezes, of the College of the City of New York, and Dr. Henry Moskowitz, president of the New York Municipal Civil Service Commission, were made members of this committee, the province of which included not only the subjects of service instruction for those already in the municipal service, but also the training of men and women for admission to the municipal service.

This committee held a number of important conferences and, largely through the cooperation and vital interest of Dr. Moskowitz, succeeded in developing a comprehensive system of service instruction for municipal employees.

3. *Subcollegiate courses*.—For the large number of clerical and subclerical employees, who are seeking advancement, a number of courses of instruction are being given in the Municipal Building without charge for tuition and without expense of any kind to the employees. These courses are furthermore definitely correlated with the civil-service tests in which these employees must qualify for advancement in salary and for promotion in rank. The registration for this instruction, which is being given wholly on the employees' time after 5 p. m., has been so large that, although liberal provision had been made, it was found necessary to turn away more employees than could be accommodated.

For the lowest grade of clerks, courses in stenography and courses in typewriting were provided. For stenographers, courses in advanced English and speed classes in stenography were organized. Instruction in arithmetic was offered to the clerks, and courses of study in algebra and geometry were given to those seeking to enter the engineering profession.

4. *Clerical courses*.—In the typewriting class instruction was given to office boys and junior clerks in the touch system of typewriting.

The curriculum was that usually found in an elementary class in typewriting, and the instruction was given by an efficient instructor of many years of experience in the public high schools. The elementary stenography class afforded an opportunity to clerks to obtain instruction in the principles of Isaac Pitman stenography.

The formulation of the courses of instruction in advanced stenography and in advanced English required more care and skill in planning. Both of these classes were intended primarily for the benefit of the stenographers in the city service. The advanced stenography class was divided into two sections, to one of which dictation was given at the rate of 50 words a minute, and to the other at the rate of 100 words a minute. Gradually the rate of speed of each section was increased by the instructor as the proficiency of the class seemed to warrant it. The plan of instruction was to give a dictation to one section, and permit the members of that section to study their notes while the instructor dictated to the second section. Next, the members of the first section read back their notes to the instructor, who placed the most important outlines on the blackboard, and explained them in detail to the class. The same method of instruction was followed with the second section.

5. *Instruction in English.*—Unusual skill was shown by the instructor in English, who was also an experienced public high-school teacher, in the formulation of his courses. On the first night of each class he requested the pupils to write a letter on what instruction they desired. This letter was corrected and graded by the instructor. Pupils receiving less than 7 points out of a maximum of 10 were placed in the elementary class, and the remainder were placed in the advanced class. Each class was given instruction in English composition by means of lectures, demonstrations, classroom themes, and an optional daily home-work theme. The subject matter of the themes and of the classroom recitations was correlated with the daily duties and the civil-service requirements of the employees, and in this way the instruction was made more concretely valuable.

6. *Collegiate courses.*—For those municipal employees desiring instruction of collegiate rank the entire curriculum of the College of the City of New York in its evening session was thrown open, and in addition special courses of instruction in municipal accounting and in engineering were planned and offered. Most of these courses were given after 7 p. m. in the college buildings. As this college is supported by public funds, all of its courses are free to those men who are able to meet its entrance requirements. Municipal employees who are unable to meet these requirements because of lack of secondary education, are admitted upon payment of a small fee.

SERVICE INSTRUCTION IN PHYSICAL EDUCATION.

RECREATION FACILITIES.

1. *Introduction.*—A stenographer who combined the ability and efficiency of the twentieth-century business woman with the delicate charm of the nineteenth-century girl asked advice regarding courses of instruction in the evening—which would be of most value to her? She was told that after spending the day in the office engaged in mental activities under high nervous tension she was in greater need of physical activities possessing recreative features than of additional mental activities. It was pointed out to her that she had gained by experience a more comprehensive grasp of the subjects usually taught to stenographers than she could ever expect to obtain from theoretical evening courses in business English, secretarial duties, and the like.

The suggestion that she join a class in folk dancing, which would give her the physical exercise and recreation which would be of greater benefit to her, appealed to her sound business judgment. Inquiry of the colleges and universities of the city revealed the fact that none of them offered late afternoon or evening classes in folk dancing. Their classes in folk dancing, intended primarily for college students and public-school teachers, were held in the early afternoon.

2. *Dancing class for women.*—A suggestion that the stenographers be permitted to organize a dancing class in the evening in one of the large rooms of the city office building was met by the objection that such a use of the building might be considered improper. A further suggestion that a dance expert be employed to instruct the stenographers was discouraged on the ground that it would savor of commercialism. Eventually, however, it was possible to organize for the stenographers the educational and recreative activities which were considered desirable for their personal welfare and their business efficiency.

Through the cooperation of Prof. Thomas D. Wood, of the department of physical education of Columbia University, there was secured as instructor for the class a postgraduate student who consented to teach the class for the experience which it gave her. Through the cooperation of the secretary of the public recreation commission of the city, the use of one of the city's gymnasiums was secured for one hour a week in the evening.

The ability, tact, and winsome personality of the teacher, who was a Vassar graduate, with excellent training in folk dancing at Columbia, won the admiration of the stenographers. The complete freedom and relaxation which they enjoyed during this hour was a novel and most pleasurable sensation. The return of a healthy, ruddy

color to cheeks which had been pale from confinement in the office, and the transformation of the careworn faces of the business women into fresh, radiant, buoyant girlish expressions, were rich compensation for the efforts expended in organizing this class.

3. *Class for men.*—As soon as this class had been fully established the young men employed in the building requested permission to join it. It was not deemed advisable to admit them because their admission would have necessitated the substitution by the young women of the formalities of the ball room for the freedom of the playground. Yet the request of the young men for recreative opportunities was a reasonable one which was not to be denied. Through the cooperation of Joseph Lee, supervisor of recreation of the department of parks, the services of a competent gymnasium teacher were obtained, who taught these young men a setting-up drill one hour a week in one of the city's gyms near the Municipal Building. Through the cooperation of the United States Volunteer Life Saving Corps, which is a department of the city government, the services of a swimming instructor were obtained, who taught these young men swimming and diving in the pool of one of the city's free baths during the remainder of this hour each week. It was found that swimming and light gymnastics were as popular among the men as folk dancing and social dancing were among the women. The light gymnastics and the folk dancing furnished the more valuable physical exercise in each case and the swimming and the social dancing furnished the larger opportunities for recreation and relaxation.

4. *Swimming classes.*—At the beginning of the summer the class in dancing was discontinued, owing to the inability of the instructor to continue this work. The members of the class formed a swimming class for the summer months, and this class was given the exclusive use of two of the city's swimming pools for one hour a week from 5 to 6 o'clock. Through the cooperation of the United States Volunteer Life Saving Corps, two competent women instructors were obtained, of whom one devoted her time to teaching those young women to swim who had not yet mastered this art, and the other spent her time in teaching advanced strokes to those who could swim. About 200 hundred young women enrolled for this work and received an opportunity to learn to swim, and facilities for refreshing relaxation after the day's work in the office in the hot months of June, July, and August, without any expense or outlay of any kind other than that involved in the purchase of the inexpensive one-piece bathing suit which all patrons of the city's pools are required to wear.

5. *Social dancing.*—During the second winter two classes in social dancing were organized, one for women and the other for men. Ex-

pert instructors for each class were furnished by Joseph Lee, supervisor of recreation of the department of parks, and an invitation was extended to the employees of each of the 57 municipal departments to avail themselves of this instruction. The registration was even larger than during the first year, and by concentrating the instruction on social dancing and omitting the folk dancing and the calisthenics the instructors were able to make each student proficient in several dances before the end of the course in the spring.

At the beginning of the summer each of the dancing classes was again turned into a swimming class. More than 250 women and more than 200 men enrolled in these swimming classes. Furthermore, when more than 1,000 employees of the Metropolitan Life Insurance Co. asked permission to join these swimming classes, it was found necessary to organize separate classes for their benefit. Miss Maud Osborn, of the United States Volunteer Life Saving Corps, Miss Lillian Glassford, of the People's Bath, and Robert Blogg, of the United States Volunteer Life Saving Corps, instructed these classes during the second summer and succeeded in making every student who attended regularly fully able to take care of himself in the water.

6. *Swimming certificates.*—At the end of the summer, examinations were conducted to test the proficiency of the students. There was a simple test for the beginners and a more difficult test for the advanced students. Furthermore, since some swimmers lack confidence in swimming in their street clothes, and since an ability to do so without panic is a most valuable asset in an emergency, an opportunity was given the students to take these tests in their street clothes.

Certificates of proficiency of four grades, signed by me and by the president of the Borough of Manhattan of the city of New York, with whose cordial cooperation these courses of instruction were organized, were presented by the borough president personally to each employee who succeeded in qualifying in these tests.

7. *Gymnastic instruction.*—For the third winter the curriculum of the dancing classes for men and for women was greatly extended. In addition to offering to the employees instruction in social dancing, an opportunity was also afforded them to obtain instruction in the elementary principles of self-defense, in gymnastic work possessing practical value in emergencies, such as ladder climbing, vaulting, etc., and in simple calisthenics definitely correlated with daily activities.

The police commissioner cooperated by giving male and female instructors an opportunity to take the complete course in self-defense in the New York police training school, and the facilities

of the swimming class for men were extended to the members of the uniformed forces of the police and the fire departments.

8. *Lectures.*—In addition to the instruction in dancing, swimming, gymnastics, calisthenics, and self-defense, there were organized several courses of lectures on city government, delivered by the commissioners of the 18 most important municipal departments, and on personal hygiene by eminent specialists in their respective fields and financial talks by experts in the world of finance. These lectures, which were generally delivered during the noon recess, were well attended and gave the employees much authoritative information of distinct practical value.